MIDDLE PERIOD HUNTER-GATHERERS OF THE THOMPSON RIVER DRAINAGE, BRITISH COLUMBIA: A CRITICAL REVIEW

by

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BA., Simon Fraser University, Burnaby, B.C. 1999

Thesis submitted in partial fulfillment of
the requirements for the degree of

Master of Arts

In the Department
of
Archaeology

SIMON FRASER UNIVERSITY
January 2004

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TITLE OF THESIS: Middle Period Hunting and Gatherers of the Thompson River Drainage, British Columbia: A Critical Review

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Middle Period Hunting and Gatherers of the Thompson River Drainage, British Columbia: A Critical Review

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ABSTRACT

Over the past two decades, the majority of archaeological research in the Canadian Plateau of British Columbia has been conducted under the auspices of cultural resource management (CRM). The findings of CRM research are presented in unpublished reports. These projects provide valuable information on site distribution, archaeological assemblage composition, and environmental setting, all of which can contribute to our overall understanding of the archaeological record. Unfortunately, much of the information remains in the so-called "grey literature" of contract archaeology and seldom receives the attention it deserves.

In this thesis, I carefully examine published and unpublished texts to summarize and discuss what is now known about the Middle Period (ca. 7,500–3,800 BP) for the Mid-Thompson River region, British Columbia. My goal is to make information about it, and about how we know what we know of it, more accessible. Subsistence, mobility, land use, artifact typologies, paleoenvironmental reconstruction, and culture history are the key themes discussed in relation to interpretations of the Middle Period archaeological record that have been presented in published culture-historical models over the past four decades. Following this review, I describe 17 Middle Period archaeological sites identified in my examination of 128 unpublished reports prepared by cultural resource managers and academic archaeologists.

Tracing the historical development of the Middle Period indicates that this concept has changed over time as more research in the region has occurred. My research shows that known Middle Period archaeological sites in the study area are concentrated in river valley and terrace environments and that this likely reflects the demands of modern development in that the majority of CRM archaeological research conducted in the region has occurred in these environmental settings. In addition, I note that the diagnostic attributes proposed for the Mid-Fraser Mid-Thompson River region area do not always correlate with diagnostic attributes and radiocarbon dates from sites presented in this study. I conclude that the primary factors influencing our understanding of the Middle Period are sampling strategies that affect the construction of the archaeological record and the theoretical frameworks employed for its interpretation.

DEDICATION

For my parents who taught me that things are not always as they appear; while fostering my insatiable desire to look beneath the surface. And to Charlene, for your strength and support, I am eternally grateful.

ACKNOWLEDGEMENTS

I owe a great deal to colleagues, students friends and members of my family who have helped extend my involvement in archaeology, and who—through their own research, comments and questions—have encouraged, supported and enlightened me.

I thank all those instructors at the Burnaby campus of Simon Fraser University and at the Secwepemc Cultural Education Institute/Simon Fraser University in Kamloops who have shared their knowledge and ideas with me over the years. Their commitment and enthusiasm motivated me to write this thesis. Special thanks are owing to George Nicholas, Marianne Boelscher Ignace, Brian Chisholm, Barb Winter, Dana Lepofsky and Richard Garvin who have supported me at critical stages of my education.

I thank the following people for helping me throughout the research and writing process: George P. Nicholas, Dana Lepofsky, Barb Winter, Ross Jamison, and Cathy D'Andrea. The British Columbia Archaeology Branch provided invaluable assistance by making reports, available. I learned much from Bruce Ball, Richard Brolly, and Walt Kowal, sharing their experiences in archaeological resource management. William Prentiss, Mike Rousseau, Dana Lepofsky, Sandra Peacock, and George Nicholas generously provided pre-publication copies of their recent work. I am grateful to Knut Fladmark, Mike Rousseau, Arnoud Stryd, William Prentiss, David Sanger, Richard Hebda, Brian Hayden, Del Meidinger, Jim Pojar, and Diana Alexander for their contributions to Canadian Plateau archaeology. While I believe that all of those mentioned have contributed to an improved final thesis, I am responsible for remaining weaknesses.

I am grateful to George Nicholas and Dana Lepofsky for the care with which they reviewed my thesis, and for conversations that clarified my thinking on this and other matters. Their friendship and professional collaboration has meant a great deal to me. I must also thank Mike Rousseau for the comments and insight he provided during the final stages of this project.

I use this opportunity to express my deepest respect and thanks to the members of family: Alfred, Odette, Joseph, and especially to my sister Danielle, all of whom provided material and spiritual support at critical and opportune times. As always, it was Charlene who provided me with patience and forbearance throughout this entire process—I thank her for this and many other things. Finally, I would like to acknowledge the debt I owe to George Nicholas who not only held the door open to the past but also provided me with the tools to "turn the past on its head." Your commitment and enthusiasm motivated me to complete this research.

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— CHAPTER 1 —

MID-THOMPSON RIVER REGION HUNTER-GATHERERS

For well over a century, studies aimed at understanding hunter-gatherer lifeways have been the subject of anthropological and archaeological research. This research began with armchair speculation, which eventually led to large-scale, systematic excavations that produced the archaeological data today that are being used to interpret past lifeways and to establish culture histories. Historically, our understanding of those peoples we term hunter-gatherers has changed over time. This is due, in part, to advances in ethnographic and archaeological method and theory and to more of the archaeological record becoming known over time.

In North America, most of the archaeological record is the product of these small-scale, non-agricultural peoples. In some regions, such as western Canada, one or another form of hunting and gathering persisted up to the time of European contact. This is the case in the Canadian Interior Plateau, simply referred to as the Canadian Plateau in this thesis. In this region, Franz Boas and other early anthropologists conducted some of the first formal ethnographies and archaeological investigations during the late 19th century, through the Jessup Expedition and other initiatives. This provided a strong foundation for subsequent research related to contemporary and pre-contact aboriginal peoples of the Canadian Plateau.

David Sanger presented the initial synthesis of Canadian Plateau archaeology and culture history in late 1960s. This was followed by refinements to the initial synthesis by Knut Fladmark and by Thomas Richards and Mike Rousseau during the 1980s, and most

recently by Arnoud Stryd and Mike Rousseau in 1990s. The result has been a continually evolving baseline for understanding the past lifeways that once existed in the Canadian Plateau of British Columbia. The most recent of these, by Rousseau (in press), provides an increasingly detailed chronology and also descriptions of the technology, settlement patterns, and diet of the people who occupied the region for the past 10,000-plus years.

In the past decade, however, despite the vast amount of archaeological research has been undertaken by both cultural resource managers and academic archaeologists, few results have been formally published. At the very least, this has made it difficult to assess the archaeological record in British Columbia and curtailed the incorporation of new data into cultural-historical syntheses. This is unfortunate because of the potential importance of this record for illuminating our understanding of the processes of such topics as: (1) long-term cultural development within the region, (2) the transition from a relatively mobile lifestyle to a semi-sedentary one, and (3) the responses hunter-gatherers had to various climatic and environmental changes that occurred since the time of initial settlement.

To achieve a greater understanding of what we know and how we have come to know Mid-Thompson River region archaeology, I have chosen to focus on the Middle Period hunter-gatherers that occupied the region between approximately 3,800 to 7,500 years ago. The culture histories, archaeological data, and interpretations of these hunter-gatherers are found in both published and unpublished form. Within this thesis, I trace the historical development of the Middle Period concept through a review of these texts. I also identify five key themes—subsistence, mobility, land-use, culture-histories, and field methodology—that frame general hunter-gatherer studies. These themes are examined in

relation to the development of the Middle Period concept. Specific theories and methods that have and continue to inform Middle Period hunter-gatherer research, such as Binford's (1980) forager-collector model, the nature of culture history, and sampling strategies, are outlined. However, due to the vast nature of hunter-gatherer studies it is beyond the scope of this thesis to discuss the entire developmental history of hunter-gatherer research.

The modern and past environments of the study area are reviewed and related to the emergence of the Middle Period concept. Past environmental reconstructions are necessary to understanding the Middle Period as they have played an important role in both the interpretation of hunter-gatherer subsistence and settlement patterns and the construction of culture-historical models. The descriptions of modern environmental conditions provide the context within which archaeologists operate. For example, while past topographic and hydrological features influenced how hunter-gatherers situated themselves on the landscape, modern topographic and hydrological features impact site visibility and thus affect site identification.

In the Mid-Thompson River region, the greater portion of the archaeological record has been revealed through excavation and survey undertaken by cultural resource managers. These findings are presented in unpublished reports held at the British Columbia Archaeology Branch and on file with researchers. To achieve a better understanding of the known Middle Period archaeological record, I summarize the Middle Period site data, as presented in these unpublished reports. These summaries include several sites within the Mid-Thompson River region that have not been

incorporated into the current culture-historical models presented for the region (e.g., EeRb-144, EeRb-77).

In sum, this thesis provides a synthesis of published and unpublished Middle Period archaeological research that has been conducted in the Mid-Thompson River region, British Columbia. The key themes that frame hunter-gatherer research are examined in relation to how interpretations of the Middle Period have developed since it was first proposed four decades ago.

THE STUDY AREA

The Canadian Plateau of western North America is the region that lies between the Rocky Mountains in the east, the Fraser River in the north, the Cascades and Coastal Mountain ranges to the west (Chatters 1998: 29). The specific area my research is concerned with is the Mid-Thompson River region, which is located in the Thompson River Drainage area (Figure 1). The study area lies within an area of substantial environmental diversity; it is a landscape marked by river valleys and discontinuous highlands that range in elevation from approximately 200 to 2,100 metres above sea level (m asl). Diana Alexander (1992) has identified seven key environmental zones for the Lillooet area, all of which are also found in the Mid-Thompson River region

Basic Culture History

The primary objective of culture history is to describe and delineate chronologically what transpired in the past. This is achieved through the identification and classification of archaeological components (e.g., artifact assemblages) into the basic units of archaeological synthesis (phase, horizon, and tradition). Culture-historical

models are dependent upon the archaeological record, which is, in turn, influenced by degree of site or material preservation, site or artifact visibility, site density, and sampling methods. To offset biases, researchers can develop or employ methods that address and alleviate such issues. In addition, cultural-historical models are closely linked to past environmental conditions, which can provide both context and temporal reference for cultural traditions, horizons, or phases. The appearance of new archaeological or environmental data thus contributes to the refinement or revision of these models.

Canadian Plateau culture history has undergone a series of revisions since the 1960s. The current culture-historical model (Stryd and Rousseau 1996) consists of three primary elements: the Early, Middle, and Late Periods. Each of these periods represent archaeological units that are defined by technological shifts in material culture and possible changes in subsistence and settlement patterns. The Early Period (ca. 11,000–7,000 BP) is characterized by the initial peopling of the region (which is assumed to have lasted 3,000 years) following the end of the last glaciation through to. The Middle Period (ca. 7,000–3,800 BP) represents a range of lifeways that include generalized hunting and gathering with an increasing reliance upon riverine resources that may have affected land use and mobility. A general cooling trend is associated with this period (Hebda 1995). The Late Period (ca. 3,800–200 BP) is identified by a semi-sedentary settlement pattern associated with pithouse villages and by an increased reliance upon salmon. The climate was warm and dry throughout most of this period until modern temperatures developed (Hallett et al. 2003).

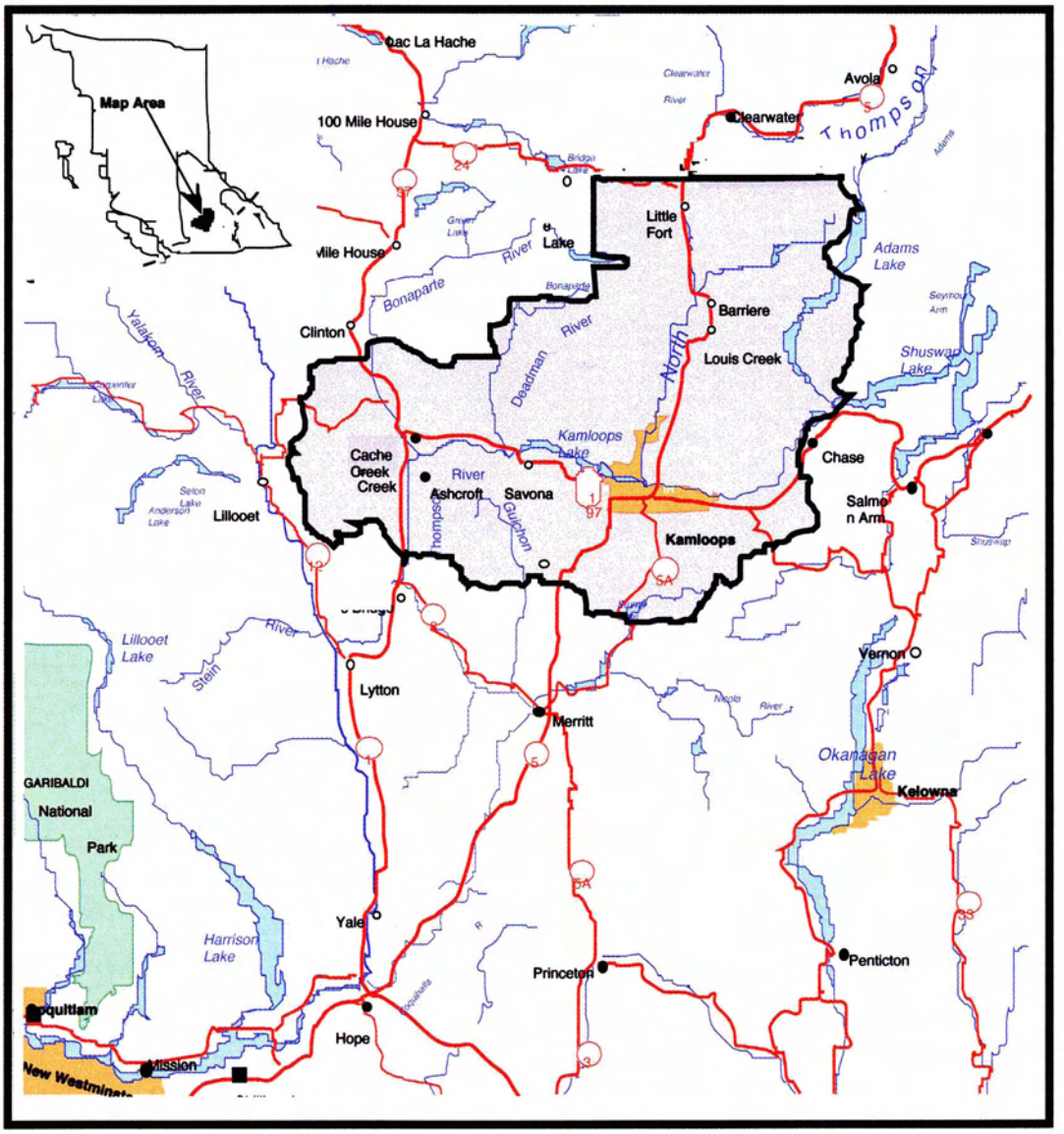

Figure 1. Map Showing Mid-Thompson River region Study Area (after 1:2,000, 000 NTS Provincial Index Map).

RESEARCH QUESTIONS

This thesis focuses on one aspect of this tripartite culture history, the Middle Period. My purpose is to (1) trace the development of this concept and its evolution over time, and (2) review the methodological approaches (including those based in both CRM and academia) and theoretical frameworks that have influenced what we know of this intriguing cultural period. In addition, I hope that this research better reveals some of the diversity of middle Holocene lifeways that is reflected in the Middle Period archaeological record. More specifically, I address the following research questions:

1. How have archaeologists defined and constructed the Middle Period?;
2. What are the factors that have influenced and continue to influence archaeological reconstructions of Middle Period hunter-gatherers in the Mid-Thompson River region?;
3. What archaeological data have resulted from recent cultural resource management (CRM) and academic research projects?; and
4. How can this information contribute to greater and more refined archaeological knowledge of the Middle Period?

To address the research questions I gathered and synthesized the published and unpublished literature pertaining to Middle Period hunter-gatherers in the Mid-Thompson River region. Site summaries were generated and discussions presented. The Mid-Thompson River region was selected as the basis for my investigations for two main reasons. The first of these pertains to the apparent lack of attention given to pre-pithouse

archaeological sites in the region. The second, but perhaps of equal importance is that the topic provides an opportunity to explore issues of subsistence, mobility, and land-use patterns occurring throughout the Middle Period.

Limitations and Scope

A major part of this research involved reviewing contract archaeology reports. To make this work more manageable, I imposed two limits on the materials reviewed. The first of these is that most of the unpublished reports I accessed were those *available* through the British Columbia Archaeology Heritage Conservation Branch (hereafter referred to as the Archaeology Branch). Some reports were unavailable and site data (including those sites revisited) were at times incomplete, or interpretations made by researchers over time were contradictory—thus they were not included. Those reports pertaining to archaeological research not requiring documentation by the Archaeology Branch, such as those conducted under the auspices of First Nations archaeological permitting systems, and non-permit investigations, were not readily available, they were not included here.

A second limitation pertains to the availability of reports on projects conducted under provincial permit. Consultants have approximately one year (after the permit is issued) to submit a final report to the Archaeology Branch. These reports are then reviewed by project officers and are accepted or returned to the report investigator/author for revisions. Once accepted, the report is sent to the Archaeology Branch library for processing (i.e., microfiche copied); it may thus take several months before it becomes available for loan. For this reason, most of the reports reviewed for this study were submitted to the Archaeology Branch prior to 2001.

Thesis Organization

This first chapter has provided a brief introduction to the study area and the primary themes that inform this thesis.

Chapter 2 discusses briefly the nature of hunter-gatherer lifeways and describes five themes that frame my observations of interpretations of Middle Period lifeways in the Mid-Thompson River region: subsistence, land-use and mobility, artifact typologies, culture history, and field methods and sampling. I also review the two main types of archaeological research currently occurring in the Mid-Thompson River region: CRM and academic archaeology. This is followed by a description of the research methods employed in this study.

Chapter 3 describes both the modern and past environments of the greater Mid-Thompson River region area. This information is derived from a variety of primary sources (e.g., Hebda 1982, 1995) and secondary sources (e.g., Stryd and Rousseau 1996). I include a summary of the seven environmental zones present as they provide one of the criteria used by cultural resource managers to predict archaeological site potential. A basic understanding of the different types of environments that were once present in the study area is important as because they provide the context for culture-historical models. I examine the relationship between environment and archaeological interpretations to illuminate how and why culture-historical models change over time.

Chapter 4 summarizes the historical development of Middle Period research as it appears in published texts. My review begins with initial work in the region by Harlan Smith and James Teit, in the early 20th century although there was then no recognition of the Middle Period, let alone any recognition of significant antiquity for the region. Next,

the culture histories proposed by Sanger (1969), Fladmark (1986), Richards and Rousseau (1987), and Stryd and Rousseau (1996) are presented in detail. The nature of the artifact assemblages, types of site interpretations, and range of proposed lifeways implicit in these models are also examined and discussed.

Chapter 5 presents an inventory of the Middle Period archaeological sites identified during the review of 128 CRM reports currently on file at the Archaeology Branch, in addition to various unpublished academic reports. Thirty-one known or suspected Middle Period archaeological sites are described in terms of geophysical setting, artifact assemblages, and site interpretation—17 of those are presented in detail. This is followed by a discussion of the implications these data may have to our understanding of past and current reconstructions of Middle Period hunter-gatherers.

Chapter 6 reviews and discusses the main themes presented in this thesis. The issues of Middle Period hunter-gatherer subsistence, settlement, and the nature of culture history are discussed in relation to the data recovered during the examination of the unpublished CRM and academic archaeology reports.

A series of appendices provides radiocarbon dates from archaeological sites in the entire Mid-Fraser Thompson River region, including those from Middle Period sites presented in chapter 5. Also included is a copy of the form utilized to extract information from unpublished consulting and academic archaeology reports.

— CHAPTER 2 —

PUTTING THE MIDDLE PERIOD INTO CONTEXT

To gain a better understanding of the Middle Period hunter-gatherer lifeways and to identify factors that may influence our perceptions about them, five themes are considered in this chapter: (1) subsistence, (2) land-use and mobility, (3) artifact typologies, (4) culture history, and (5) field methods and sampling. Each of these themes have factored in the development of the Middle Period concept. In this chapter, I review these and discuss the approaches to Middle Period research occurring in the greater Mid-Thompson River region. The first three themes are presented in the first section of this and the remaining two appear at the end of the chapter

THEMES IN HUNTER-GATHERER RESEARCH

For over a century, the investigation of hunter-gatherer behaviors has engaged scholars throughout the world. Hunter-gatherers have frequently been classified by their modes of subsistence and how they use their landscape (e.g., Bettinger 1991; Binford 1980). They have been defined as people without domesticated plants (Lee 1992) whose mobility and technology was determined by local food type and availability (Kelly 1995), both of which, in turn, were influenced by environmental conditions (Binford 1980, 2001). Subsistence strategies, settlement patterns, and technology have provided the framework in which hunter-gatherers have often been studied. I examine these briefly here and also relate them to the Middle Period hunter-gatherers in British Columbia.

Subsistence

The criteria used to define hunter-gatherers have often centered on subsistence strategies (e.g., Binford 1980; Winterhalder 1987). The manner in which hunter-gatherers are defined (e.g., "big-game" hunters) can be attributed in part to how the past is perceived, which can change over time (e.g., Kelly 1995: 65). For example, following the "Man the Hunter" conference in 1966 (Lee and Devore 1968), some archaeologists turned their attention from animal to plant foods, indicating that the hunter-gatherer diet included a wide range of plants and aquatic resources (Kelly 1995). Other researchers employed approaches borrowed from other disciplines, such as optimal foraging theory, a concept developed by ecologists that is based on the premise that organisms (in this case, humans) will make informed decisions in order to maximize their returns (e.g., Bettinger 1991; Kelly 1995: 3). Such theories have been used to develop models that can be applied to explain both general and specific aspects of hunter-gatherer behavior and to reconstruct hunter-gatherer subsistence strategies (Thomas 1998: 412–413).

Expectations of Middle Period Subsistence. It has been proposed that hunter-gatherers extracted resources systematically from their environment and that the amount and types of resources utilized were dictated by environmental factors (Binford 1980). For example, the amount of freshwater mollusks consumed by hunter-gatherers should be relative to the amount of freshwater mollusks available within a particular locality. When environmental conditions change and do not favor a particular resource, such as freshwater mussel populations, that had once been available, other resources should be consumed at a higher rate. Thus, environmental change affects resource availability and this, in turn, influences how people interact with their environment. Based on this

assumption, knowledge of the variety of resources once available in a particular locality and of the environmental conditions affecting these resources can assist in determining subsistence patterns. With this in mind, how can information about the local environment and climate inform us of Middle Period lifeways in British Columbia and what types of data are needed to produce representative indications of past subsistence patterns?

Middle Period hunter-gatherers have been characterized as highly mobile foragers whose subsistence was oriented to hunting large ungulates (elk and deer), harvesting freshwater mollusks, and fishing for salmon (Rousseau 1993; Stryd and Rousseau 1996; Rousseau, in press). Paleoenvironmental reconstructions suggest that ungulate populations would have flourished during most of the Middle Period because of the extensive grasslands that dominated the landscape (Hebda 1995). In addition, freshwater mollusks were also abundant at this time (Lindsay 2003). Both the environmental (e.g., slightly warmer and dryer conditions than today) and archaeological data (e.g., high frequency of ungulate remains and freshwater mollusks in Middle Period site contexts) have been used to reconstruct Middle Period subsistence patterns and culture history (Figure 2).

During the later part of the Middle Period, climatic change led to a decrease in grazing lands that affected ungulate populations and led to extensive forested areas that favored a wider range of flora and fauna (Hebda 1995). Based on this and changes noted in the Middle Period archaeological assemblage, it has been proposed by several researchers that subsistence strategies during the latter part of the Middle Period shifted

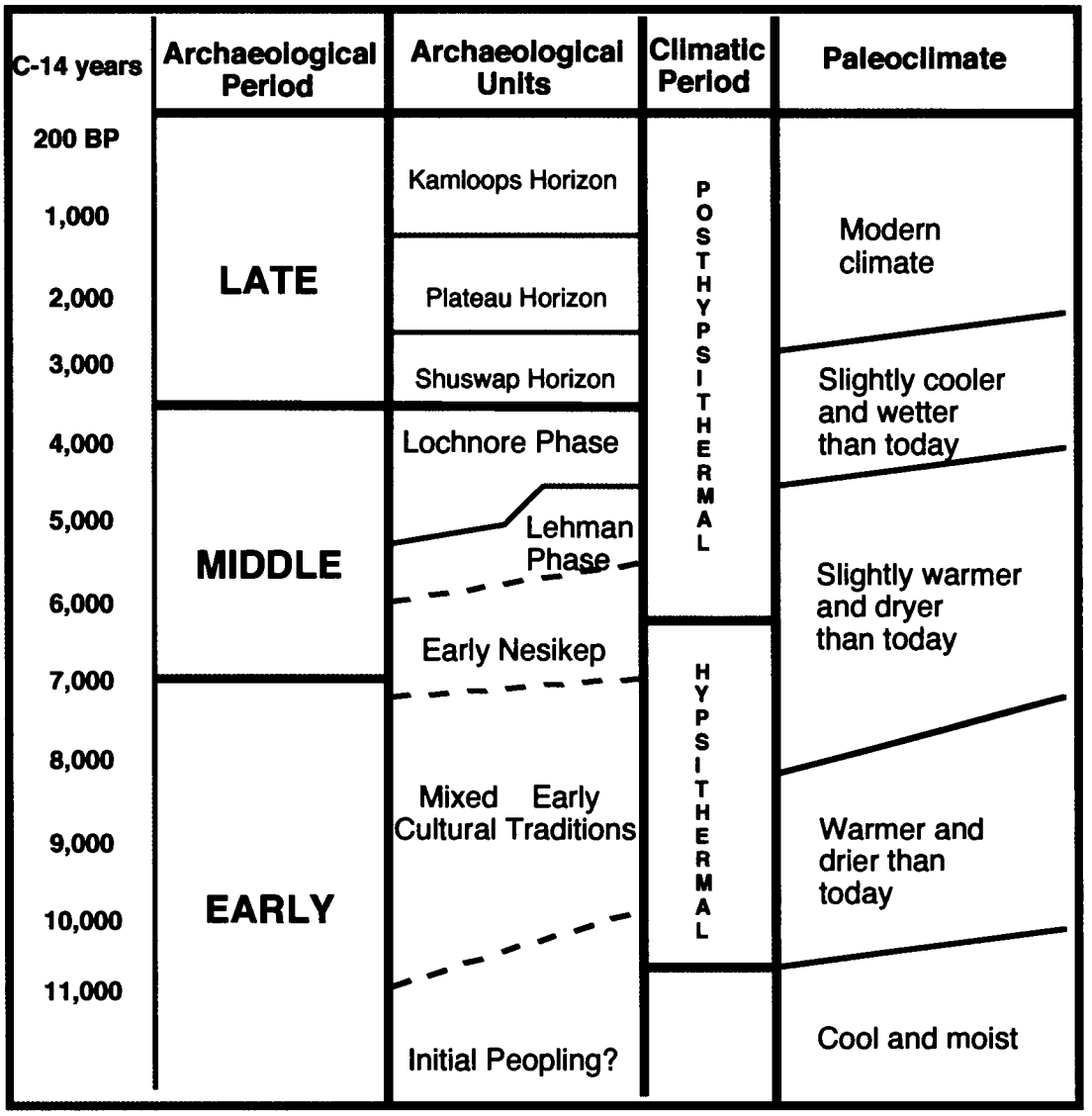

Figure 2: Revised culture-historical sequence for the Mid Fraser-Mid-Thompson River region area. (Stryd and Rousseau 1996: 179, used with permission).

from an emphasis on hunting (elk and deer), to an increased reliance upon fishing (salmon) and gathering (roots, berries) (e.g., Fladmark 1986; Rousseau, in press). The transition from hunter-gatherers to hunter/gatherer/fishers has received much attention by researchers over the past four decades (e.g., Fladmark 1982, 1986; Richards and Rousseau 1987; Stryd and Rousseau 1996). Some researchers suggest that during the Middle Period, hunter-gatherer subsistence gradually changed from opportunistic foraging to logistically oriented collecting–a notion highly influenced by paleoenvironmental and archaeological data (e.g., Kuijt 1989; Rousseau, in press). Transitions in subsistence patterns can also be linked to transitions in land use and mobility, which comprise settlement patterns.

Hunter-Gatherer Settlement

The manner in which hunter-gatherers utilized their landscape to acquire resources can be expressed by two behavioral elements: *land use* and *mobility*. There is a great degree of variability associated with how hunter-gatherers utilize the landscape (Kelly 1995). In areas where resources are highly concentrated and abundant (e.g., coastal British Columbia), hunter-gatherers may exhibit limited mobility. In contrast, in regions where resources are widely distributed over the landscape (e.g., the Canadian Plateau), hunter-gatherers exhibit greater mobility to facilitate the extraction of these resources, except under those circumstances where resources come to them. For example, coastal waterways provide concentrated and reliable resources, whereas the resources associated with rivers and streams of the Canadian Plateau are seasonally variable. Thus, hunter-gatherer land use and mobility can largely be understood and modeled on the basis

of abundance and distribution of resources across the landscape (Binford 1980; Fitzhough and Habu 2002). These aspects of hunter-gatherer settlement are defined as follows.

Hunter-gatherer land use can be defined as the differential distribution of activities (e.g., food collecting) over space, which will be reflected in the archaeological record to varying degrees (Dancey 1973). The type of land-use record produced is a reflection of group behavior over time (e.g., Nicholas 1987: 105). Hunter-gatherers that are focused on a limited range of widely distributed and highly unpredictable resources should produce land-use patterns that are non-repetitive. If this was the case during the early postglacial period, for example, we would then expect an archaeological record that is nearly invisible, or at least very difficult to discern. In contrast, hunter-gatherers that are focused on the extraction of highly productive, reliable, and concentrated resources on the landscape should produce land-use patterns that are more visible (Nicholas 1987: 105–106). The intensive exploitation of localized, reliable resources will be reflected in site distribution patterns and artifact assemblage composition (Kuijt 1989), which may serve as a useful guide when examining Middle Period site data.

Mobility can be defined as "the nature of movements of people across a landscape" (Chatters 1987: 339). The dimension of mobility is best understood and described in terms of the degree of movement exhibited by hunter-gatherers, as illustrated by a continuum of settlement strategies that have been referred to by some researchers as foragers and collectors (e.g., Binford 1983a; Fitzhough and Habu 2002). The focus of the forager-collector system is not based on the frequency of movements made by hunter-gatherers but on the organization of residential moves relative to food acquisition activities (Kelly 1995: 120). Highly dependant upon the environmental determinants of

resource variation and availability, this model can be used to assist in predicting what types of hunter-gatherer behavior occurred in certain localities. This system does not account for all hunter-gatherer groups, but instead provides a "...continuum of settlement forms and possibilities" that can be used to interpret past lifeways" (Kelly 1995: 120).

The forager-collector system also has implications in terms of understanding tool kit composition. Hunter-gatherers often possess tool technology that is oriented to extracting and procuring resources relative both to their environment and their associated mobility strategy (Binford 1980). Ideally, forager residential sites are characterized by processing, maintenance, and manufacture activities where raw lithic material may be present in large quantities (Binford 1983a: 343). Sites characteristic of resource extraction locales may contain exhausted or abandoned tools (if any at all) (Binford 1983a: 343).

Alternatives to the forager-collector model include, but are not limited to, the diet breadth model and the patch choice model (Bettinger 1991; Kelly 1995). The objective of the diet breadth model is to predict resource exploitation patterns (Kelly 1995), whereas the patch choice model assumes that hunter-gatherers will move sequentially and/or randomly from one resource to another (Kelly 1995: 90). Although these models have been applied to characterize and describe a number of contemporary and past hunter-gatherer societies, they have not been employed by Canadian Plateau archaeologists to infer hunter-gatherer mobility.

Expectations of Middle Period Land Use and Mobility. Hunter-gatherer land use can be explored through the analysis of both the spatial and functional patterning that exists within and between archaeological sites (Chatters 1981). In the Mid-Thompson

River region, archaeological sites types range from small, single-use areas characterized by the presence of lithic debitage and ungulate remains, to large multiple occupation areas that contain evidence of food storage, pithouse living structures, and vast artifact assemblages. This information may be used to determine, to some degree of reliability, the type and the duration of occupation that can then be used to assist in reconstructing hunter-gatherer mobility (e.g., Fitzhough and Habu 2002; Kelly 1992).

Artifact Typologies

Another issue affecting reconstructions of hunter-gatherer lifeways centers on utilizing artifact typologies not only to classify artifacts, but also to infer past behavior. Artifact typologies are determined by morphological traits such as similarities in shape and mode of manufacture (Thomas 1998: 239). Researchers deal with morphological differences by establishing individual characteristics (i.e., attributes) that distinguish artifacts from one another. Common attributes include size, weight, form, texture, material, manufacture method, and design pattern. Artifact variation stems from such factors as the ability of the technologist, group identity, functional demands, or the material types used. Artifact typologies also depend on the methods used by archaeologists to define group attributes. Human nature dictates that some people are "lumpers" and others are "splitters." Thus, variation in archaeological artifact assemblages is compounded by variation in the types of attributes selected by researchers to determine typologies. Based on the factors described above, typological classification is somewhat problematic. However, if attributes are explicitly outlined then they can serve as useful criteria for classifying artifacts.

Artifact types that can be linked to particular time periods or cultural traditions are referred to as diagnostic artifacts. The temporal placement may be established by using either distribution of the types or its association with radiocarbon dates. Of course, when projectile point morphology did not always change significantly over time, those types cannot be relied upon as temporal markers (Flenniken and Wilke 1989). Another limitation associated with diagnostic artifacts is tied into the formulation of culture chronologies because morphological changes may represent functional, not cultural change (see Binford 1983b).

Middle Period Artifact Typology. The reliance upon morphological traits to assist in distinguishing and defining specific culture-historical units has led to a debate regarding certain Middle Period projectile points. For example, the use of the leaf-shaped lanceolate bifaces and/or corner or side-notched bifaces (e.g., Lochnore bifaces) as temporal markers is controversial if geographical and functional factors are not taken into consideration (Stryd and Rousseau 1996: 193). In addition, some researchers propose that v-shaped corner-notching provides a generally accurate chronological marker (Sanger 1970: 121; Stryd and Rousseau 1996: 188), but not when relied upon to the exclusion of other non-diagnostic components of the archaeological assemblage (Nicholas 1987: 103). The use of non-diagnostic artifact types, such as unifacially retouched flakes, cores, and lithic debitage, may assist in placing components in their relative chronological order and to refine culture-historical models.

UNDERSTANDING THE CULTURE HISTORICAL MODEL

This thesis revisits several culture-historical models proposed for the greater Mid-Thompson River region in British Columbia, to achieve a greater understanding of

how such models have developed over time. I begin with a brief overview of the culture historical concept.

In 1958, archaeologists Gordon Willey and Philip Phillips defined a standardized framework for organizing archaeological material that was based on artifact typology. The primary objective of their culture-historical model was to describe the spatial and temporal relationships between archaeological data through the examination of changes noted in the style of specific artifacts, and to document the behaviors and activities occurring over time (Willey and Philips 1958: 12). Constructing culture histories incorporates analysis at both the local (e.g., site) and the regional levels. The system is based on identifying archaeological components within particular site contexts. Those are then classified into the basic units of archaeological synthesis: *component*, *phase*, *horizon*, and *tradition* (Thomas 1998; Willey and Philips 1958).

Components can be defined by the widespread occurrence of several prominent cultural traits and patterns that are identified in the archaeological assemblage that are not limited to a localized geographical area (Thomas 1998: 257). The act of determining patterns in artifact assemblages can be highly subjective especially in cases where sites are mixed due to natural or cultural disturbances.

A *phase* represents the basic building block of local and regional chronologies. It is defined by shared culture traits that are both temporally and spatially limited to a locality or region, and are formed by combining components from different site contexts (Willey and Philips 1958: 22). Thus, phases define archaeological culture units marked by a distinctive set of artifacts restricted to a relatively short time period and to localized areas.

Horizon refers to a "...spatial continuity represented by cultural traits and assemblages whose nature and mode of occurrence permit the assumption of a broad and rapid spread" (Willey and Philips 1958: 33). A horizon can be used to group two or more phases together, which are situated within a particular region or locality (Caldwell 1966). They are distinguished from each other on the basis of differences in subsistence, land use and mobility, technology, artifact attributes, and burial practices (Richards and Rousseau 1987: 7).

Traditions are defined as a "definite patterning of subsistence practices, technology, and ecological adaptation" (Willey and Philips 1966:4). As defined by Goggin (1949), a cultural tradition represents a distinctive way of life dominated by certain themes where internal change occurs but does not affect or alter principal lifeways. In short, the primary characteristics of a cultural tradition are extended time-span, spatial continuity through time and space, and artifact assemblages that reflect subsistence strategies, ecological and technological adaptation, and social organization (Richards and Rousseau 1987: 5).

Culture-historical models proposed for the greater Mid-Thompson River region area incorporate the four concepts presented here. The following section briefly explores how they have been used to construct the Middle Period culture history.

Middle Period Culture History. The current Middle Period culture history proposed for the greater Mid-Thompson River region area consists of two cultural traditions (Figure 2). The first of the two traditions proposed for this model, the Nesikep Tradition, spans approximately 2,000 years and includes the Early Nesikep and Lehman Phases. The Early Nesikep and Lehman phases are similar in terms of subsistence modes,

settlement patterns, and technology; both share a terrestrial-oriented subsistence base and reliance on freshwater mollusks, projectile point continuity, high group mobility, and diversified wide-spectrum land-use/resource extraction strategies (Stryd and Rousseau 1996: 187).

The second cultural tradition represented in the Middle Period is the Plateau Pithouse Tradition. Although it spans approximately 5,000 years, only a portion of this tradition, the Lochnore Phase, occurs during the latter part of the Middle Period (Stryd and Rousseau 1996: 179). During the Late Period, subsistence strategies were both terrestrial and riverine oriented (Stryd and Rousseau 1996: 191–197). There is evidence of increased sedentism throughout this period (Richards and Rousseau 1987). The remainder of the Plateau Pithouse Tradition occurs during the Late Period includes three cultural horizons: Shuswap, Plateau, and Kamloops (see Richards and Rousseau 1987).

Constructing culture histories is a necessary first step for broad-scale synthesis, but it cannot be the only goal of archaeological research. Furthermore, it cannot be assumed that the traditions, phases, or horizons presented for the region are the best measures that might be applied to understanding the Middle Period archaeological record in the Mid-Thompson River region because these concepts are defined by known archaeological data. The culture historic framework for the Canadian Plateau has undergone numerous revisions based on the recovery of new archaeological data (as discussed in subsequent chapters). It may be that the focus on refining typologies and creating regional culture histories has prevented archaeologists from employing more effective techniques that might better address contemporary research issues. Nevertheless, the existing culture-historical models cited above continue to be widely

used by researchers as a means to determine and define the temporal and spatial relationships within and between archaeological sites.

APPROACHES TO MIDDLE PERIOD RESEARCH

There are two different approaches or types of Middle Period research occurring in British Columbia. The first, cultural resource management (CRM) oriented archaeology, is concerned with investigations aimed at protecting sites from the negative impacts of development. The second, academic archaeology, is characterized by university, First Nations, or museum-based research projects. Middle Period culture history has been built upon archaeological data gathered from both approaches. I briefly discuss each of these in the following section.

Cultural Resource Management

In the past two decades, the majority of archaeological research undertaken in the province of British Columbia has occurred under the auspices of CRM. The primary objectives of archaeological resource management are to eliminate or mitigate the negative impact of land altering development. In such investigations, archaeological sites, cultural material, and features are identified through surface reconnaissance and judgmentally placed subsurface testing. These field methods are influenced by site density and site visibility but especially the time constraints and the experience of the contracted researchers (McManamon 1994: 99). Archaeological data that are (a) situated in areas deemed to exhibit less archaeological potential, (b) deeply buried, or (c) adjacent to, but not within, the development boundaries may thus not be identified (McManamon

1994). It is therefore difficult to "...ensure that potentially significant and representative resources are adequately considered" (Nicholas 1994: 25).

CRM-oriented research has yielded much of the archaeological data that have been used to formulate local and regional culture histories. For example, mitigative excavations at the Baker site (EdQx-43) increased significantly the overall artifact inventory associated with Lochnore Phase assemblages (Stryd and Rousseau 1996: 193). The majority of archaeological sites identified by CRM archaeologists cannot, however, be assigned to a particular cultural unit unless a temporally diagnostic artifact is recovered or radiocarbon dates or other chronological indicators are available—a problem discussed in Chapter 5.

The identification of Middle Period diagnostic artifacts or organic materials for radiocarbon dating is related to the sampling of landforms that are the appropriate age to contain these archaeological sites. Landscape features change through time and the landscape of today may obscure features once present in the past. Difficulties may arise during field survey when researchers attempt to reconstruct ancient landscapes (e.g., past hydrological features). Knowledge of the regions geomorphologic history and its relation to past land-use can thus assist researchers in identifying archaeological deposits.

The results of CRM projects are not widely disseminated, but are often found within the "grey literature" of contract reports held at the provincial Archaeology Branch or elsewhere. Difficulties in accessing these reports have likely discouraged many researchers from using this information to its full potential. Another challenge facing synthesizers is that through the decades there has been no standardized CRM report format, which can leads to difficulties when comparing research findings. Despite such

challenges, CRM facilitates academic research. For example, site selection for the latter is often based on sites previously identified by the former. In addition, the ever-increasing demands of modern development, such as oil exploration, timber harvesting and road construction, indicate that the funding of CRM archaeological projects will continue to occur as long as there is legislation in place to protects cultural resources.

Academic Research

The second type of archaeological research occurring in British Columbia is academic archaeology. I use this admittedly awkward term to refer to research projects that operate directly under the auspices of universities or museums. The results of CRM archaeology projects contribute to academic archaeology. Academic archaeological projects are generally less constrained (i.e., length of project time) then CRM projects. On the other hand, while academic archaeology projects have far greater latitude, they too may have to operate within the parameters set by: (a) funding agencies, (b) project duration, (c) faculty research interests, (d) experience of researchers, and (e) university stipulations (e.g., the duration of field season).

Academic excavations differ from those conducted during CRM studies primarily in terms of overall research objectives. CRM objectives are often oriented towards the avoidance, protection, or salvage of culture deposits within a limited time frame and within very constrained spatial boundaries (e.g., the project right-of-way), whereas academic researchers (in most cases) are less bound by time and can incorporate a wider range of research objectives. The goal of this thesis is to pull the "grey literature" out from the shadows of published texts and to place these findings in the spotlight.

— CHAPTER 3 —

MODERN AND PAST ENVIRONMENTS OF THE MID-THOMPSON RIVER REGION

Hunter-gatherers, perhaps more than any other type of society, are closely linked to the environments they occupy (Binford 1983a; Steward 1955). This is evidenced by the nature of their lifestyle, as expressed through population size and density, degree of mobility, and subsistence patterns. Naturally, changes in any of these settings will usually lead to changes in other facets of their lifeways, whether new technological innovations or adaptations, a shift to other food resources, changes in land-use patterns, or group emigration.

Since hunter-gatherers are responsible for virtually all of the archaeological record of the Mid-Thompson River region, archaeologists are naturally very interested in both the environments that were present in the past and the modern environment that affects, for example, site visibility. Information about the former illuminates the nature (and context) of indigenous lifeways in the region for both the late pre-contact and historic periods, while knowledge of the latter is necessary for any degree of understanding about earlier times associated with mobile hunter-gatherers.

In the Mid-Thompson River region, the relationship between paleoenvironmental research and culture history is evident in the articles and reports of various archaeologists. In the 1960s, for example, David Sanger carried out investigations in the Lochnore-Nesikep locality that resulted in the Mid-Fraser Thompson River region's first

culture historical sequence. The first major revision to this sequence (Rousseau and Richards 1985; Richards and Rousseau 1987) was correlated with advances in environmental research that occurred in the in the 1980s (e.g., Hebda 1982).

This chapter reviews the modern environmental and climatic conditions for the Mid-Thompson River region. It begins with descriptions of the modern environment organized by the seven environmental units defined by Alexander (1992). Beyond their utility in characterizing the modern landscape, these units are also important as they sometimes represent part of the criteria currently used in the CRM Archaeological Overview Assessment (AOA) process that assess and determine the archaeological site potential of specific areas. In addition, many studies in the region define archaeological sites through the use of Alexander's (1992) environmental units (e.g., Kowal and Ball 1999).

The second part of this chapter provides an overview of the paleoenvironmental history of the region, from the late Pleistocene through to the late Holocene. Knowledge of how and when environmental conditions changed in the past have influenced culture historical models proposed for the Canadian Plateau region (e.g., Fladmark 1986).

MODERN ENVIRONMENTAL CONDITIONS

The study area can be divided into seven environmental units: Alpine, Montane Parkland, Montane Forest, Intermediate Grasslands, Intermediate Lakes, River Terraces, and River Valleys (Table 1). This classification scheme was originally devised to facilitate ethnoarchaeological research in the Lillooet locality (Alexander 1992; Tyhurst 1992), but has since been expanded and applied to reflect the range of environments in

Environmental Unit	Elevation	Dominant Tree Species	Seasons Utilized	Economic Resources	Expected Site Type	Potential Biases
Alpine	Above 1,980 m	whitebark pine, subalpine fir, lodgepole pine, Englemann spruce	summer, early fall	hunting and limited gathering	isolated lithic scatters	inaccessible terrain, rock outcrops, erosion
Montane Parkland	1,525–2,135 m	whitebark pine, subalpine fir, lodgepole pine, Englemann spruce	fall	hunting and gathering	larger basecamps	dense ground cover, poor preservation
Montane Forests	610–1,980 m	whitebark pine, subalpine fir, lodgepole pine, Englemann spruce	spring, summer	gathering, wetland resource exploitation, hunting	plant gathering and hunting, associated with streams	low site visibility, poor preservation, modern impacts
Intermediate. Grasslands	915–1370 m	Douglas maple, paper birch, scrub birch	late spring, summer, fall	hunting and gathering	basecamps, transit camps, processing, roasting pits, kill sites	erosion, bioerosion
Intermediate. Lakes	Below 1,070 m	Douglas fir, balsam poplar, trembling aspen, rocky mountain maple, alder	spring, summer, fall	fishing, wetland resources, hunting and gathering	base camps, food processing, gathering localities	poor preservation, modern impacts (e.g., irrigation
River Terraces	300–610 m	Ponderosa Pine, Douglas fir, trembling aspen, paper birch, balsam poplar	spring, summer	Small game, proximity to water, riverine resources	plant processing, procurement, lithic maintenance and manufacture	modern impacts erosion, bioturbation, deflation
River Valley	Below 60 m	Ponderosa Pine, Douglas fir, trembling aspen, paper birch, balsam poplar	fall and winter	riverine resources	pithouse villages, food storage, short and long-term transit camps	erosion, modern impacts, deeply buried deposits

Table 1. Environmental units proposed by Alexander (1992) for the Mid-Thompson River region.
*metres above sea level

the Interior Plateau and the Mid-Thompson River region (Ball 1998). Alexander's scheme incorporated biogeophysical data.

The initial biogeoclimatic classification scheme was developed by Krajina (1965; see also Annas and Coupé 1979; Meidinger and Pojar 1991; Mitchell and Green 1981) and has been most recently revised by Lloyd et al. (1990). The intention was to identify categories of ecosystems that could be utilized by environmental resource managers. Alexander's differs from this as hers was specifically designed to relate to human land use and social processes.

Each of the seven zones is briefly described below. Table 1 identifies the major vegetation of each unit and identifies the major types of aboriginal utilization of them as proposed by Alexander (1992). The application of these land-use and resource exploitation patterns for earlier Holocene times is discussed later in this chapter.

Alpine

The Alpine environmental unit corresponds to the Alpine Tundra biogeoclimatic zone (Mitchell and Green 1981), and is located at elevations above 1,980 m (Alexander 1992: 49). Characteristic of the alpine environment are long winters, with heavy snowfalls and a very short growing season (Lettmerding 1976, cited in Reimer 2000: 58). In low-lying areas, the snow pack lasts longer, contributing to moist conditions that can support a range of sedges, grasses, and shrubs, as well as stunted sub-alpine tree species such as whitebark pine (*Pinus albicaulis*), subalpine fir (*Abies lasiocarpa*), lodgepole pine (*Pinus contorta*), and Englemann spruce (*Picea engelmannnii*) (Mitchell and Green 1981, cited in Alexander 1992: 52) (Figure 3). Although the Alpine area was primarily

utilized for hunting, ethnographic and archaeological evidence indicates that oil-rich whitebark pine nuts were harvested (Lepofsky, in press). Archaeological sites identified in the Alpine unit are generally small and often attributed to hunting activities (Alexander 1992).

Montane Parkland

The Montane Parkland environmental unit as defined by Alexander (1992) is also referred to as the Parkland subunit of the Engelmann Spruce-Subalpine Fir biogeoclimatic zone (ESSF) (Lloyd et al. 1990), ranges in elevation from 1,525 m to 2,135 m (Alexander 1992: 76). A major difference between the Montane Parkland and the Alpine unit is a reduction in wind due to increased tree density. Tree species of the Montane Parkland include whitebark pine subalpine fir, lodgepole pine, and Englemann spruce. Characteristics of this environment are krummholz (i.e., stunted) trees, parkland meadows, and open stand subalpine trees (Alexander 1992: 76; Parish et al. 1996: 18). The best deer hunting occurs in the Montane Parkland (Palmer 1974: 18), thus the archaeological sites most commonly identified are larger "basecamps" associated with both hunting and gathering (Alexander 1992). However, ethnographic and archaeological evidence indicates that whitebark pine nuts were harvested in the Montane Parkland environment (Lepofsky, in press).

Montane Forests

Alexander's (1992) Montane Forest environmental unit consists of the ESSF and

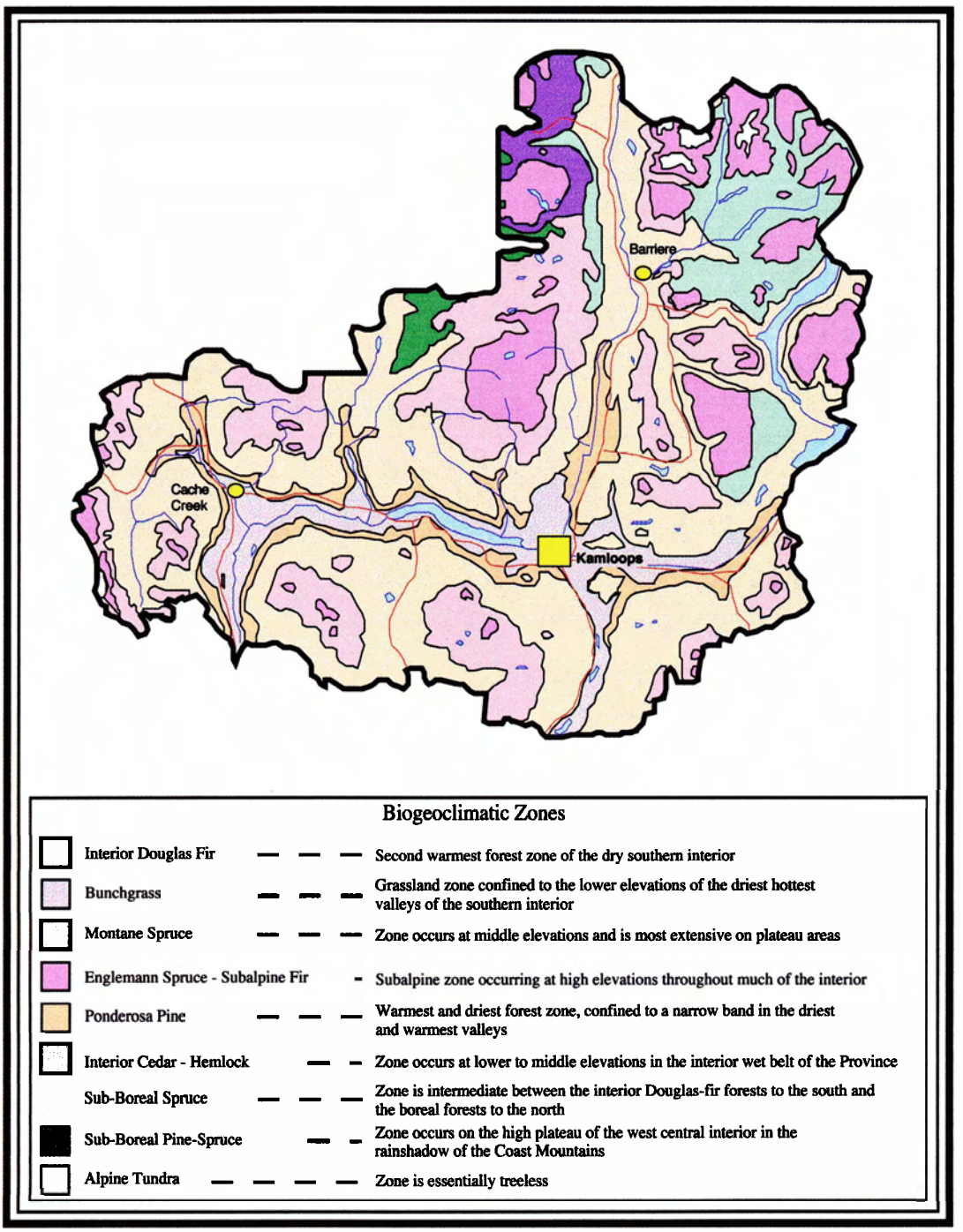

Figure 3. Biogeoclimatic Zones for the Mid-Thompson River region (Meidinger and Pojar 1991, used with permission).

and the Interior Douglas fir (IDF) biogeoclimatic zones (Lloyd et al. 1990; Parish, et al. 1996: 16). These forests range from 610 to 1,980 m in elevation, with the most common tree species being whitebark pine, subalpine fir, lodgepole pine, and Englemann spruce (Parish et al. 1996: 34–39). Temperatures vary, depending upon elevation, and are below 0 degrees Celsius for half of each year (Alexander 1992: 79).

This environmental zone hosts the most diverse range of plant food sources available, and is home to a number of wetland flora and fauna species in the Canadian Plateau region. Based on ethnographic and archaeological evidence, Alexander (1992: 147) indicates that "single-use kill and/or butchering sites, multiple use hunting sites at deer fences, plant gathering sites, and short and long-term transit camps along streams" will be most common in this area. Ethnographically, plant harvesting in Montane Forest environments occur between March and August (Alexander 1992: 81; Marianne Ignace pers. comm. 2002).

Intermediate Grasslands

The Intermediate Grasslands environmental unit occurs in the IDF unit between 915 and 1,370 m in elevation (Alexander 1992: 82). It is characterized by flat or gently sloped terrain adjacent to stream valleys and steep rolling slopes at the edges near the mountains (Alexander 1992: 82). Deciduous trees and shrubs associated with streams and meadows include Douglas maple (*Acer glabrum*), paper birch (*Betula papyrifera*), and scrub birch (*B. glandulosa var. glandulosa*) (Parish et al. 1996: 26, 73, 78). Archaeological sites most commonly associated with this unit are basecamps and transit camps, kill sites, and butchering sites (Alexander 1992: 150).

Intermediate Lakes

Intermediate Lakes are found at mid-altitude elevations below 1070 m (Alexander 1992: 84). Lake water levels vary throughout the year, reaching their maximum extent during the spring. The decreasing levels of snow pack in the past fifty years and demands from agriculture and irrigation have resulted in a substantial decrease in water levels (Alexander 1992: 85).

Vegetation is dominated by Douglas fir (*Pseudotsuga menzeisii*), cottonwood/ balsam poplar (*Populus balsamifera*), trembling aspen (*P. tremuloides)*, rocky mountain maple (*Acer galabrum var. douglasii*), and alder (*Alnus sinuata*). Wetland environments, which provided very important resources to past peoples (Nicholas 1998), are most common within this environmental unit and some associated plant communities include cottonwood mushrooms (*Tricholoma populinum*), water parsnip (*Sium suave*), silverweed (*Potentilla anserina spp. anserina*), and swamp gooseberries (*Ribes lacustre*) (Alexander 1992: 86; Parish et al. 1996: 17). In the drier areas further from the lakes, plant species are the same as those found in the Intermediate Grassland zone. Archaeological site types expected to be identified in this environmental unit may be associated with fishing, hunting, and gathering activities (Alexander 1992: 150).

River Terraces

The glaciolacustrine terraces that line the Fraser and Thompson Rivers are characteristic of Alexander's (1992) River Terrace environmental unit. The terraces are located in the Ponderosa Pine and Bunchgrass biogeoclimatic zones at elevations ranging

between 300 to 600 m (Green and Mitchell 1981). These broad terraces are a major feature of the modern landscape.

River Terraces represent the driest environmental unit in British Columbia, and are often covered by sagebrush (*Artemisia tridentata*) and bunchgrass (*Agropyron spicatum* or *Elymus spicatus*) (Alexander 1992). In localities where there is an adequate supply of water, Ponderosa Pine, Douglas fir, cottonwood and balsam poplar, trembling aspen, and paper birch are present (Alexander 1992: 86; Parish et al. 1996: 13). The archaeological sites often identified in this environmental unit are small, temporary sites (single and multiple occupation) that are characteristic of plant processing and lithic tool maintenance and manufacture (Alexander 1992: 159).

River Valley

The River Valley environmental unit proposed by Alexander (1992: 88) is located at elevations below 60 m. Situated within the Ponderosa Pine and/or Bunchgrass biogeoclimatic zones, river valleys share the same vegetation and climate with River Terraces, where summers are hot and dry and winters are cold and windy.

Fish are the primary resource utilized in this zone. Four species of salmon—sockeye (*Oncorhynchus nerka*), spring (*O. tschawytscha*), coho (*O. kisutch*), and pink (*O. gorbuscha)*—are present and most plentiful in July and August (Alexander 1992: 89). Other fish species include bridgelip suckers (*Catostomus columbianus*) and sturgeon (*Acipenser transmontanus*).

Archaeological evidence suggests that riverine resources were very important to the past occupants of the Mid-Thompson River region. Archaeological sites commonly

found along the River Valley are semi-sedentary occupation areas that are characterized by house pit depressions, vast artifact assemblages, and cache pits. (Alexander 1992: 164; Richards and Rousseau 1987: 49–58; Wilson and Carlson 1980: 9). In addition, it is also likely that the rivers served as transportation routes.

PAST ENVIRONMENTS

Culture-historical models proposed for the Canadian Plateau and the Mid-Thompson River region have incorporated paleoenvironmental data to assist in determining the forces of culture change and explaining the diversity within the archaeological record. Culture change is often associated with climatic shifts that affected the economic resources utilized by people in the past (e.g., Kuijt and Prentiss, in press; Richards and Rousseau 1987). Perhaps the most significant of these was the transition from mobile hunter-gatherer lifeways to semi-sedentary ones. This was prompted, at least in part, by environmental shifts that led to a reliable and readily available resource—anadromous salmonids (Stryd and Rousseau 1996). Moreover, recent research into hunter-gatherer subsistence and mobility indicates that the procurement of plant resources by roasting occurred as early as 3,200 BP (Lepofsky and Peacock, in press), which suggests that environmental conditions during the middle Holocene favored riverine and plant resources.

Paleoenvironmental reconstructions have influenced the entire culture history of the region as major climatic shifts (e.g., temperature and precipitation) have been used in conjunction with archaeological data to construct the regions culture-historical model. For example, the Holocene includes three major climatic intervals: (1) "xeothermic," a

warm and dry period ca. 9,500–7,000 BP, (2) "mesothermic," a warm and moist period ca. 7,000–4,500 BP, and (3) the moist climate ca. 4,500–present (Hebda 1995: 76). The interpretation of each of the major cultural units recognized in the Canadian Plateau have been influenced by the postulated conditions at their respective times, as reviewed in the following section and in Table 2.

Late Pleistocene-Early Holocene

For much of the Pleistocene, the Mid-Thompson River region was glaciated. Glacial processes acting upon the landscape have left topographical evidence in the form of rolling uplands and deeply incised rivers, as well as erratics and glacial striae found at high elevations (Hebda 1995: 65; Sanger 1970: 7). Studies in the area undertaken by Fulton (1969), and later by Clague (1981), Hebda (1982, 1983, 1995), and Mathewes (1985) indicate that the region was ice-free approximately 12,000 years ago. However, radiocarbon dates from partially fossilized salmon identified in Kamloops Lake indicate that deglaciation may have occurred earlier (circa 16,000–18,000 BP) (Carlson and Klein 1997). The initial settlement of the Mid-Thompson River region likely occurred as soon as floral and faunal populations were established (Stryd and Rousseau 1996; Sanger 1970).

The early postglacial episode is marked by cool and moist trends that continued until approximately 11,000 BP (Hebda 1982) (Table 2). Paleoenvironmental studies undertaken by Hebda (1982, 1983, 1995) and Mathewes (1985) indicate that populations of pine, alder, and poplar were thriving in upland areas and valley-side locales, while

Years Before Present*	Major Climatic Event	Climatic Condition	Vegetation
pre 12,000–16,000	Glaciation	cold and wet	undetermined
pre 11,000	Early Post-Glacial	cool and moist	pine, alder, poplar, sagebrush, bunchgrass
ca. 11,000–7,000	Hypsithermal	warmer and dryer than present	Douglas fir, expansion of grasslands
ca. 7,000–4,500	Middle Holocene	slightly warmer and dryer than present	limited expansion of grasslands
ca. 4,500–2,400	Middle-Late Holocene	slightly cooler and wetter than present	reduction of grasslands
ca. 2,400–1,200	Late Holocene	warmer and dryer than present	increased forest openings, droughts and flooding
ca. 1200–200	Late Holocene	modern climate	longer winters, later spring

Table 2. Paleoenvironmental reconstruction proposed for the greater Mid-Thompson River region (Hebda 1982, 1995).

bunchgrass and sagebrush flourished in well-drained areas. By 11,000 BP, the rise of pronounced warm, dry conditions evidenced locally were part of the hypsithermal, a continent-wide climatic event (Hebda 1982). The hypsithermal had a major impact on regional environmental conditions, affecting not only fauna and flora, but also undoubtedly the people occupying the landscapes of this time. The warmer, dryer conditions led to the expansion of grasslands and Douglas fir communities (Hebda 1995: 65) that may have supported moose, mountain sheep, and deer or other game that were sought by highly mobile human groups (Stryd and Rousseau 1996: 180), as well as plant communities in upland (root resources) and wetland environments (e.g., swamp gooseberry).

Middle Holocene

The middle Holocene is characterized by a general cooling trend (Hebda 1995). During the initial stage of this climatic interval, mesic grasslands reached their maximum extent and greater precipitation led to increased lake levels (Hebda 1983: 251; 1995).

The forests were composed of a variety of moisture dependant species (e.g., alder, aspen, hemlock); wetland environments were extensive (Hebda 1995). These conditions may have favored plant resources such as water parsnip, silverweed, and lilies, as well as an array of edible fungi (mushrooms) (Parish et al. 1996: 17). After ca. 4,500 BP, the moist climate conditions did not persist and temperatures became gradually cooler, which led to the reduction of grasslands and forest tree-line decent. Decreases in water levels (as a result of reduced precipitation) led to an increase in fish populations and freshwater mollusks (Hebda 1995).

During the middle Holocene, hunter-gatherer subsistence and settlement patterns are thought to have changed because of the paleoclimatic shifts that affected ungulate grazing and led to an increases in anadromous fish populations (Fladmark 1986; Richards and Rousseau 1987). The degree of mobility associated with hunter-gatherers is thought to have gradually decreased at this time, primarily because resources were becoming more concentrated and less widely distributed over the landscape (Kuijt 1989).

Late Holocene

The late Holocene is composed of two climatic intervals followed by modern climatic conditions. These intervals are characterized by a distinct shift from the cooler middle Holocene climate to that of warmer and dryer conditions (ca. 2,400–1,200 and ca. 1,100–750 BP) (Hallett et al. 2003). It is likely that these conditions led to changes in the reliance upon upland plant resources (i.e., balsalm root) by hunter-gatherers at this time. Archaeological evidence indicates that root roasting may have peaked between 2,600 to 1,600 BP suggesting that the warm and dry conditions impacted plant resources, and in turn, hunter-gatherer land-use and subsistence strategies during the late Holocene (Lepofsky and Peacock, in press). Forest openings also resulted from the overall warming trend (Hebda 1982, 1983). An increase in salmon remains from late Holocene archaeological contexts in the region have been used to support the hypothesis that increased sedentism reflected the exploitation of this highly reliable resource (Richards and Rousseau 1987; Rousseau, in press).

DISCUSSION

Our understanding of hunter-gatherer lifeways is intimately tied to both the archaeological record and our comprehension of modern and paleoenvironments. Knowledge of modern environments is especially important in: a) identifying sites, b) interpreting site formation processes, and c) reconstructing late pre-contact lifeways. Paleoenvironmental data, on the other hand, are important for determining hunter-gatherer subsistence and settlement that, in turn, affect site distribution patterns and artifact assemblages. This discussion is focused on the relationship between these key issues within the parameters of Canadian Plateau hunter-gatherer research.

The Archaeological Overview Assessment (AOA) process employed by CRM archaeologists is often influenced by the environmental zone(s) present in the area of interest. These zones are composed of variable topography, hydrology, and vegetation that can impact site visibility and identification. For example, sites situated on homogenous flat terrain that are today covered by dense vegetation may be overlooked during archaeological field inspections because of poor ground surface visibility. Knowledge of specific types of hydrological features, such as extinct drainage channels or lake shorelines present in an area, can assist in identifying sites and reconstructing past land use that can aid in site identification. The relationship between modern vegetation, topography, and hydrology is also critical during site identification.

Dynamic geophysical settings such as modern drainage systems and flora can displace the original location of archaeological materials. For example, extensive grasslands dominated the landscape during the Middle Period. Today, however, many of these areas are treed and archaeological deposits have been impacted and displaced by

their root growth. Understanding the nature of flora within a particular study area can assist in determining how archaeological deposits are affected by natural process over time. This knowledge may increase the potential of discovering archaeological sites and interpreting site stratigraphy.

Knowledge of the modern environment is also important for understanding the late pre-contact period. This relationship is exemplified by Alexander's (1992) research that incorporates ethnographic knowledge and modern environmental data to provide insight into land-use patterns and modes of subsistence during the Late Period. As archaeological research in the Mid-Thompson River region continues and the paleoenvironmental history is refined, Alexander's (1992) model may become increasingly useful for interpreting Middle and Early Period sites.

The environmental history of the study area has provided archaeologists with a temporal scheme that has been used to model site types and distribution patterns and to interpret hunter-gatherer land use, subsistence, and settlement strategies. Our understanding of the archaeological record is closely tied to the knowledge of past environments. Canadian Plateau archaeologists have used paleoenvironmental data to affirm what was already known, or to assist in reconstructing hunter-gatherer subsistence strategies or settlement patterns (e.g., Stryd and Rousseau 1996).

— CHAPTER 4 —

THE PUBLISHED ARCHAEOLOGICAL RECORD OF THE MID-THOMPSON RIVER REGION

If we are to understand the Middle Period concept as it is employed today, a necessary first step is to review its development. Interest in the Canadian Plateau archaeological record began in the early 1900s. James Teit (1900) and Harlan I. Smith (1913) were the first to document their experiences with the aboriginal peoples they encountered in the Mid-Thompson River region, and to document the material culture associated with them. Smith's motivation was oriented toward to understanding pre-contact lifeways in the region and to gather data for the American Museum of Natural History, while Teit, an ethnographer employed by Franz Boas as part of the Jessup North Pacific Expedition (1900), was concerned with observing contemporary aboriginal behavior.

The Mid-Thompson River region received little further professional archaeological or ethnographical attention until the 1960s when David Sanger conducted the first archaeological investigations in the Lochnore-Nesikep Creek locality (Sanger 1968). Sanger's research objective was to gain insight into the overall lifeways associated with the early occupants of the region. David Sanger was, in fact, the first to apply the notion of a "Middle Period" to characterize middle Holocene hunter-gatherers. Since its initial introduction, the Middle Period concept has been refined by several researchers

over the past four decades, notably Knut Fladmark (1986), Thomas Richards and Mike Rousseau (1987), and Arnoud Stryd and Mike Rousseau (1996).

This chapter provides a summary of the historical development of the culture histories for the region, especially the Middle Period. I begin with a brief overview of the first archaeological research conducted in the Mid-Thompson River region. This is followed by a description of the initial culture-historical sequence developed by David Sanger (1969), and of two culture-historical models presented in the 1980s by Fladmark (1986) and Richards and Rousseau (1987). The final part of the chapter outlines the most recent culture-historical model proposed for the Mid-Thompson River region by Stryd and Rousseau (1996) and summarizes more recent developments.

PIONEERING WORK

The foundations of Interior Plateau archaeology began at the turn of the past century by such prominent institutions as the American Museum of Natural History and later with the National Museum of Canada. This section examines the work, methodological approaches, culture-historical models proposed by some of the archaeologists who conducted fieldwork in the region between the late 1890s and the late 1960s and explores their lasting contributions to Plateau archaeology.

Early Investigations

Harlan I. Smith conducted the first archaeological research in the Canadian Plateau between 1897 and 1899. Working for the Jesup North Pacific Expedition, Smith excavated several burials near Kamloops, Lytton, and Spences Bridge. He identified similarities between the archaeological materials he recovered (Smith 1900: 432–433)

and the ethnographic accounts recorded earlier by Dawson (1891: 7–12) and Boas (1891).

James Teit (1900) also conducted research in the Canadian Plateau, specifically among the Interior Salish peoples of the Thompson River Region. Teit who was married to a Nlaka'pamuk (Thompson) women, documented the material culture and the behaviors associated with the Thompson. He also undertook an intensive study of the architecture of semi-subterranean pithouse dwellings. This research continues to serve as the principal source of information regarding pithouse construction.

Initial Archaeological Research

David Sanger is considered by many to be has been identified as the true pioneer of British Columbia's Canadian Plateau archaeology (Richards and Rousseau 1987: 8). He began his career in the 1960s working for the National Museum of Canada. Sanger's initial investigations were conducted in the Lochnore-Nesikep Creek locality, a tributary of the Fraser River, located mid-way between the modern towns of Lytton and Lillooet. His objective was to "...reconstruct, in as much detail as possible, the culture, or way of life of past peoples" of that region, including not only artifact inventories but also types of housing, burial, social organization, and how people interacted with their environment (Sanger 1968: 7).

It was the work Sanger carried out in 1962 at the Nesikep site (EdRk-4) that allowed him to establish the basic cultural sequence for the area. This was followed in 1964 by more extensive work, which included excavations at six sites in the area: Nesikep Creek (EdRk-4), Cow Springs (EdRk-5), McPhee (EdRk-6), Lochnore Creek

(EdRk-7), Lehman (EdRk-8), and Pine Mountain (EdRk-9) (Sanger 1966: 1). This work produced approximately 4,500 artifacts in addition to the 2,000 recovered during surface collection (Sanger 1966: 1). Based on the palynological studies and archaeological data then available for the region, he proposed the following archaeological periods: Early, Lower Middle, Upper Middle, and Late Periods. These he further divided into five cultural units: Lochnore complex, Early Nesikep Tradition, Lower Nesikep Tradition, Upper Nesikep Tradition, Late Nesikep Tradition (Table 3). The following section provides a brief description of the culture history presented by Sanger (1969).

Sanger's Culture History. Based upon his research in the Canadian Plateau, Sanger estimated that the area had a long history of occupation, spanning approximately 9,000 years and that human occupation occurred soon after deglaciation (Figure 4). He postulated that the initial peopling of the Mid-Fraser Thompson River region occurred between 9,000 and 7,000 BP (Sanger 1970: 126). He called this period the Lochnore complex and proposed the bi-pointed projectile point as the diagnostic point for this period (Sanger 1969: 192). Leaf-shaped points, pebble choppers, concave-margin unifaces and macroblades were also present in the Lochnore complex lithic assemblage. Sanger (1968: 3) characterized the initial occupants of the Mid-Thompson River region as hunter-gatherers who possessed a chipped-stone tool technology, with spear points predominating artifact assemblages. He inferred modes of subsistence and land use from his archaeological investigations and what was then known about the region's paleoenvironmental history.

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch. Assemblage	Subsistence	Culture Traits	Arch. Sites
9,000–7,000	Initial Peopling	Lochnore Complex	bipointed bifaces	leaf-shaped projectile points, macroblades, pebble choppers	deer, fish	mobile hunter-gatherers (large game hunting)	Drynoch (EcRi-1), Lochnore Creek (EdRk-7, Zone III)
7,000–5,000	Early	Early Nesikep	microblades, lanceolate, corner notched bifaces, concave bases	microblades, leaf-shaped bifaces, bone and antler, perforators, pounding tools	elk, deer, fish, freshwater mollusks	mobile hunter-gatherers (large game hunting)	Nesikep Creek (EdRk-4); Lehman (EdRk-8)
5,000–3,500	Lower Middle	Lower Nesikep	microblades, formed bifaces expanding stems, concave bases	microblades, leaf-shaped bifaces, cobble choppers, concave unifaces	deer, fish	mobile hunter-gatherers	Nesikep Creek (EdRk-4); Lehman (EdRk-8)
3,500–2,000	Upper Middle	Upper Nesikep	corner and basal notching	microblades, pecked, flaked, ground stone	deer, fish	hunter-gatherers (less mobile)	Nesikep Creek (EdRk-4); Lehman (EdRk-8)
2,000–200	Late	Late Nesikep	triangular, side-notched	bow and arrow technology	fish, ungulates, small game	semi-sedentary pithouse villages dwelling fisher-hunters	Lochnore Creek (EdRk-7), EdRk-3, EeRh-1, EeQw-1

Table 3. Sanger's (1969, 1970) culture history and associated characteristics.
• uncalibrated radiocarbon date.

Sanger's Early Period, also known as the Early Nesikep, was characterized by chipped lithic artifacts that were typologically similar to Scotsbluff, Milesand, and Plainview (Carlson 1996: 73–96). Early Nesikep cultures occurred from approximately 7,000–5,000 BP following the initial occupation of the Mid-Fraser Thompson area. The artifact assemblages of Early Nesikep occupations were characterized by microblades, leaf-shaped bifaces, a variety of scraping, perforating, and pounding tools, and woodworking implements including antler, and rodent incisor teeth—although many of these tool types were not inherently different from those of later occupations (Sanger 1968: 3). Sanger (1966: 20; 1968: 7) also noted technological similarities between the lanceolate, and side-notched points and those found in northern Plains assemblages and indicated that that corner-notched points with concave bases were almost indistinguishable from Hanna points (Sanger 1966: 20; Wheeler 1954). The apparent correlation between Prairie and Plateau cultures has received attention by several researchers including Ball and Magne (1999), Duke and Wilson (1994), and Rousseau and Richards (1985).

Early Nesikep people were thought to have been highly mobile, with a subsistence base consisting primarily of deer, fish, and freshwater mollusks (Sanger 1968: 3; 1970: 126). Trade with coastal groups may have been established during the Early Nesikep based on the presence of dentalium and *Olivella* shell in the archaeological assemblages (Sanger 1968: 3).

Following the Early Period, Sanger proposed a Middle Period that he divided into Lower and Upper archaeological units based both on differences in artifact morphology and on his interpretations of land-use and mobility (Table 3). He indicated that the Lower

Middle Period (also known as the Lower Middle Nesikep) archaeological assemblage consisted of microblades, leaf-shaped bifaces, cobble choppers, concave-ended unifaces, and bone and antler tools (Sanger 1969: 192). The technological attributes associated the Lower Middle Period were formed bifaces "...with expanding stems and frequently indented or concave bases" (Sanger 1968: 4). Sanger also placed great emphasis on microblades and thought they represented a very high level of technology (Sanger 1968: 4); in fact, he considered them the diagnostic artifact for the entire Nesikep Tradition. He proposed that subsistence was centered on large ungulates, a hypothesis that would continue through many subsequent models (e.g., Richards and Rousseau 1987; Stryd and Rousseau 1996). As Sanger's research did not address issues of preservation, it is important to note that the remains of larger fauna are less susceptible to deterioration than smaller, more easily fragmented bone.

The Upper Middle Period, (also known as the Upper Middle Nesikep) represented the final manifestation of the Middle Period (Figure 4). The artifact assemblage contained microblades, corner-notched and basal-notched points, which Sanger (1968: 4) considered indicative of the period, along with a variety of bone and antler objects, and pecked, flaked and ground stone artifacts (Sanger 1969: 192–194). Sanger (1968: 5–6) proposed that during the Upper Middle Period, hunter-gatherer land-use patterns were influenced by cooler temperatures, which affected subsistence and mobility and led to increased sedentism. He correlated environmental change with culture change although there was only limited support for this assumption.

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Plainview (Carlson 1996: 73–96). Early Nesikep cultures occurred from approximately 7,000–5,000 BP following the initial occupation of the Mid-Fraser Thompson area. The artifact assemblages of Early Nesikep occupations were characterized by microblades, leaf-shaped bifaces, a variety of scraping, perforating, and pounding tools, and woodworking implements including antler, and rodent incisor teeth— although many of these tool types were not inherently different from those of later occupations (Sanger 1968: 3). Sanger (1966: 20; 1968: 7) also noted technological similarities between the lanceolate, side-notched points and those found in northern Plains assemblages and indicated that that corner-notched points with concave bases were almost indistinguishable from Hanna points (Sanger 1966: 20; Wheeler 1954). To date, however, this apparent correlation between Prairie and Plateau cultures has received little attention by researchers with the exception of Ball and Magne (1999) and Duke and Wilson (1994).

Early Nesikep people were thought to have been highly mobile, with a subsistence base consisting primarily of deer, fish, and freshwater mollusks (Sanger 1968: 3; 1970: 126). Trade with coastal groups may have been established during the Early Nesikep based on the presence of dentalium and *Olivella* shell in the archaeological assemblages (Sanger 1968: 3).

Following the Early Period, Sanger proposed a Middle Period that he divided into Lower and Upper archaeological units based both on differences in artifact morphology and on his interpretations of land-use and mobility (Table 3). He indicated that the Lower Middle Period (also known as the Lower Middle Nesikep) archaeological assemblage consisted of microblades, leaf-shaped bifaces, cobble choppers, concave-ended unifaces,

and bone and antler tools (Sanger 1969: 192). The technological attributes associated the Lower Middle Period were formed bifaces "...with expanding stems and frequently indented or concave bases" (Sanger 1968: 4). Sanger also placed great emphasis on microblades and thought they represented a very high level of technology (Sanger 1968: 4); in fact, he considered them the diagnostic artifact for the entire Nesikep Tradition. He proposed that subsistence was centered on large ungulates, a hypothesis that would continue through many subsequent models (e.g., Richards and Rousseau 1987; Stryd and Rousseau 1996). As Sanger's research did not address issues of preservation, it is important to note that the remains of larger fauna are less susceptible to deterioration than smaller, more easily fragmented bone.

The Upper Middle Period, (also known as the Upper Middle Nesikep) represented the final manifestation of Middle Period (Figure 4). The artifact assemblage contained microblades, corner-notched and basal-notched points, which Sanger (1968: 4), considered indicative of the period, along with a variety of bone and antler objects, and pecked, flaked and ground stone artifacts (Sanger 1969: 192–194). Sanger (1968: 5–6) proposed that during the Upper Middle Period, hunter-gatherer land-use patterns were influenced by cooler temperatures, which affected subsistence and mobility and led to increased sedentism. He correlated environmental change with culture change although there was only limited support for this assumption.

Following both the Lower and Upper Middle Periods is the Late Period, also referred to as the Late Nesikep ca. 2,000–100 BP (Figure 4). The artifacts attributed to

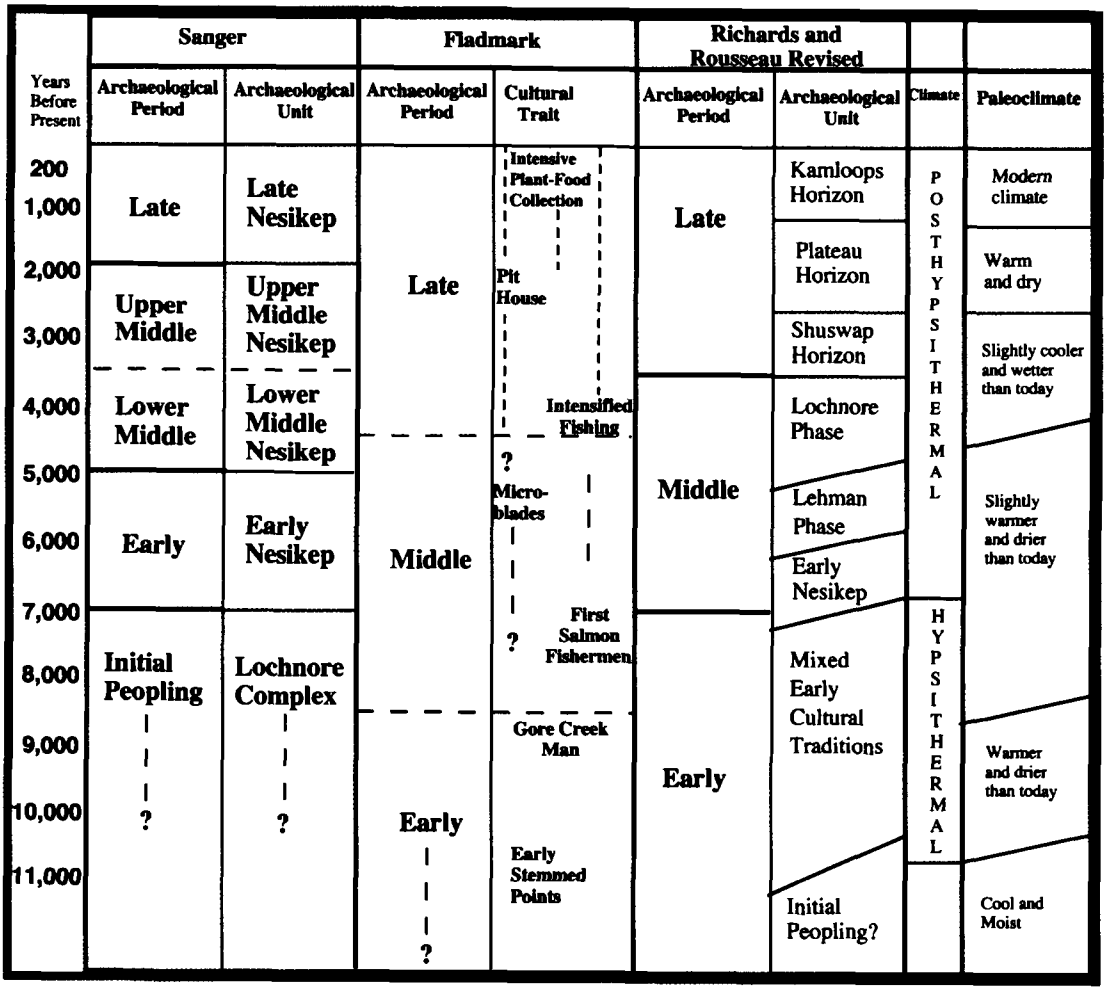

Figure 4. Culture-Historical Sequences proposed for the Mid-Fraser Thompson River region (Sanger 1969; Fladmark 1986; Stryd and Rousseau 1996, used with permission).

this period included small, triangular side-notched projectile points typical of bow and arrow technology (Sanger 1964: 136; 1966: 17). Spear points, such as those recovered from Early and Middle Period contexts, were still prevalent while microblades were absent (Sanger 1968: 6). Today, the identification of large, formed bifaces and the absence of microblades are viewed by some as reflecting sampling biases as current research has recovered microblades with Late Period assemblages (e.g., Richards and Rousseau 1987). Sanger indicated that the primary subsistence strategy was aimed at hunting large game (Sanger 1968), although his investigations did not address the possibility of other dietary resources.

CULTURE HISTORY IN THE 1980S

In the 1980s, the province of British Columbia experienced a series of economic and demographic shifts that would influence archaeology. The Interior was becoming more populated as forestry and mining drew people into the region. More archaeological research was now occurring than ever before (Richards and Rousseau 1987).

This section presents the published culture-historical models that were proposed by Knut Fladmark (1986) and by Thomas Richards and Mike Rousseau (1987). Both models utilize the same tripartite scheme of Early, Middle, and Late Period (Figure 4).

Knut Fladmark's Culture-Historical Model

Beginning in the early 1960s, Knut Fladmark led numerous archaeological investigations throughout the province of British Columbia. By the 1980s, he turned his attention to understanding how and when the Plateau was first inhabited (Fladmark 1988) and the direction from which people appeared. He argued for well-developed and well-

funded archaeological projects to insure that the data used to reconstruct Plateau culture history were representative of life in the past (e.g., Fladmark 1988: 8). Fladmark (1982) also noted that 90% of what was known about the archaeology of the Canadian Plateau of British Columbia had come from the river-side pithouse village sites of the last 4,000 years and that more effort should be made to understand earlier occupations.

In an important review article, "An Introduction to the Prehistory of British Columbia," Fladmark (1982: 101) stated that most archaeology centered on "...developing and analytically manipulating localized culture sequences whose phases, complexes and traditions, or chronologically arranged components are not intended for broad extension." Based on research that included a combination of oral history, archaeology, and geology, he proposed a general culture-historical model for the Canadian Plateau. What follows is a summary of this model with an emphasis on his interpretation of the Middle Period.

Based on archaeological and geological data, Fladmark's culture-historical model indicated that the initial occupation of British Columbia's Interior occurred after deglaciation (ca. 12,000 BP) and lasted until approximately 8,000 BP (Figure 4). This model proposed that the initial peopling of the region occurred at ca. 11,000 BP, which was some 2,000 years earlier than Sanger's original model had proposed.

Fladmark's (1986) interpretation of the Early Period was heavily influenced by his research at Charlie Lake Cave, near Fort St. John, which is still the only excavated fluted point archaeological site in British Columbia. The flaked stone artifacts from the lower components included a fluted point (ca. 11,500 BP) and an "adze" that were associated with bison and arctic hare (Fladmark 1986: 21). Based on this archaeological

assemblage, Fladmark (1988: 7) suggested that the early occupants of the Canadian Plateau might have been "specialized hunters of big-game." However, due to the paucity of Early Period archaeological data, he indicated that a generalized subsistence strategy could have been present at the time (Fladmark 1988: 7).

The next interval in Fladmark's culture-historical model is the Middle Period (ca. 8,500–4,500 BP), for which he correlates environmental changes with culture change (Fladmark 1986: 41–47). He suggested that changing climatic conditions (e.g., from cool and moist to warm and dry) could have influenced diet and mobility (Fladmark 1986: 41). Fladmark proposed a generalized subsistence pattern that would have included deer, caribou, elk, mountain goat, and small game, with fish becoming increasingly important toward the end of the Middle Period (Fladmark 1986: 51). He indicated that plant resources (e.g., roots) were probably exploited at this time (Fladmark 1986: 51).

The oldest Middle Period archaeological site in Fladmark's sequence was the Drynoch site (EcRi-1), which dates to approximately 7,500 BP (Fladmark 1986: 42) (see Appendix A for list of entire Mid-Fraser Thompson River region radiocarbon dates). The archaeological assemblage recovered at this site was tentatively interpreted as the earliest evidence of salmon fishing in the region (Table 4) (Fladmark 1986: 42). The presence of fish remains at this site was interpreted as representing a shift in subsistence from "big-game hunting" to generalized hunting and fishing. He used this to indicate the beginning of the Middle Period (Fladmark 1986: 51).

Fladmark relied upon the archaeological data recovered from the Lehman (ca. 6,600 BP) and Nesikep sites (ca. 6,500 BP) to reconstruct the Middle Period

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch. Assemblage	Subsistence	Cultural Traits	Arch. Sites
12,000–8,300	**Early**	unstated	fluted points, stemmed bifaces	adze, bison and arctic hare remains	bison, deer, elk, mountain sheep	mobile "big-game hunters"	Charlie Lake Cave; Gore Creek (EeQw-48)
8,300–4,500	Middle	unstated	side-notched bifaces	hafted bifaces, microblades, microblade cores, scrapers, antler points, ochre, bird bone, marmot incisors	deer, fish	mobile, general hunters and fishers	Drynoch Slide site (EcRi-1); Lehman (EdRk-8); Nesikep (EdRk-4)
4,500–200	Late	unstated	corner-notching and barbed bifaces	barbed and composite toggling harpoons, barbed points, net sinkers, leisters, dip nets	intensified fishing and plant gathering	semi-sedentary pithouse village dwellings, cache pits, roasting pits	FiRs-1; FgSd-1, EeQw-6

Table 4. Knut Fladmark's (1986) culture history and associated characteristics.
*uncalibrated radiocarbon date.

archaeological assemblage. He proposed that the activities associated with Middle Period sites centered on lithic tool maintenance (e.g., re-sharpening "spear points"), manufacture (e.g., microblades), and "kill processing" areas (Fladmark 1986: 44). He indicated that the archaeological assemblage would consist of microblades and microblade cores, bifaces, unifaces, and bone and antler technology (Fladmark 1986: 44). The bifaces identified at the Lehman and Nesikep sites were large side-notched and corner-notched forms, which Fladmark associated with hafting a technology that he proposed came from eastern North America (Fladmark 1986: 46).

Based on evidence from the Nesikep site, Fladmark (1986: 46) argued that microblade technology was widespread, both temporally and spatially, and was not representative of a single cultural period. Despite the lack of evidence of woodworking tools in archaeological contexts he hypothesized that wood was used not only in the construction of temporary habitation sites, but also for tools (Fladmark 1986: 51).

The signature archaeological features associated with the Late Period were pithouse dwellings and, to a lesser extent, storage and roasting pits (e.g., Fladmark 1986: 124–127). Fladmark (1986: 129, 131) indicated that the Late Period artifact assemblage included corner-notched, barbed points that appeared to decrease in size after approximately 2,500 BP; in addition to barbed and composite toggling harpoons, barbed bone points, net sinkers, leisters, and dip nets. He also noted that wild plant resources were intensively utilized throughout this period and that "earthen ovens, or baking pits" were commonly identified in the region (Fladmark 1986: 129–130).

In sum, Fladmark described the Early Period as the time of the initial peopling of the Canadian Plateau. His interpretation of this period was based on data from excavated

archaeological sites (e.g., Gore Creek, Lehman, and Nesikep) and isolated finds (Shuswap Lake area). Fladmark, much like Sanger, looked to paleoenvironmental sources to determine the earliest possible dates for the initial peopling of the region. Moreover, he proposed that people were adapting to changing environmental conditions that were occurring during the middle Holocene. This is evidenced in his culture-historical model that indicates a shift from the Early Period ungulate-oriented hunters to a more generalized hunting and fishing economy characteristic of the Middle Period. Fladmark utilized archaeological data from the Drynoch site to support his hypothesis that riverine resources were becoming increasingly important during the Middle Period and then into the Late Period (Fladmark 1986: 41).

Richards and Rousseau's Culture-Historical Model

The original culture-historical scheme proposed by Sanger (1969) was revisited by Thomas Richards and Mike Rousseau several times in the 1980s. This was prompted by the availability of new archaeological and palynological data from the Mid-Fraser River area. The main problem Richards and Rousseau sought to address was that Sanger's original sequence was proposed for a single locality (Lochnore-Nesikep) yet it had been extended to cover the entire Mid-Fraser Thompson River region. Richards and Rousseau (1986: 11) also questioned the age and duration of the Lochnore Complex and the cultural continuity (e.g., subsistence mode and settlement patterns) Sanger proposed for the Nesikep Tradition. The result was a revised culture-historical model. In it, the duration of the Nesikep Tradition was reduced from 7,000 years to approximately 2,000 years. In addition, the Lochnore complex was also reevaluated, it became the Lochnore

Phase and was estimated to range from 5,000–3,500 BP (Richards and Rousseau 1987: 13).

Early Middle Period. The initial stage in Richards and Rousseau's model is the Early Nesikep, which is associated with the Early Nesikep Tradition. The lithic assemblage (Table 5) included: corner-notched, barbed, well-made lanceolate bifaces, unifaces, microblades and microblade cores, and formed (oval) unifaces (e.g., Arcas Associates 1985; Sanger 1970; Stryd 1972). The faunal assemblage consisted primarily of antler wedges, bone points, bone needles, rodent incisors, as well as deer, elk, and, to a lesser degree salmon, steelhead trout, and freshwater mollusks (e.g., Arcas Associates 1985; Sanger 1970; Stryd 1972).

Lehman Phase. Data recovered during the excavations at both the Rattlesnake Hill (EdRi-61) and the Oregon Jack Creek (EdRi-6) in the 1980s contributed to the definition of a new archaeological unit in the regional sequence—the Lehman Phase, which now became the second archaeological unit of the Middle Period (Rousseau and Richards 1988). The Lehman Phase lithic artifact assemblage included: circular to oval unifaces with continuous retouch and large triangular, pentagonal (or elliptical) bifaces (Rousseau and Richards 1988: 41). Bifaces and knives that exhibit obliquely oriented, narrow, v-shaped side- or concave notching were called "Lehman obliquely notched" bifaces (Lawhead et al. 1986: 161; Rousseau and Richards 1988: 41). Microblades were absent (Rousseau and Richards 1988)

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch. Assemblage	Subsistence	Cultural Traits	Arch Sites
11,000–7,000	**Early**	Initial Peopling	large and medium foliate bifaces, pebble choppers and cores	stemmed and fluted points, microblades, unifaces, core fragments	deer, moose, elk, mountain sheep	mobile hunter-gatherers	Gore Creek (EeQw-48); Drynoch Slide EcRi-1
7,000–6,000	**Middle**	Early Nesikep	v-shaped corner notching, lateral barbs, parallel to expanding basal and lateral margins, edge grinding	lanceolate points, formed and unformed unifaces, microblades and cores, antler and bone, rodent incisors	deer, elk, freshwater mollusks, fish	mobile hunter-gatherers	Nesikep Creek (EdRk-4); Rattlesnake Hill (EeRh-61)
6,000–4,500	**Middle**	Lehman Phase	thin obliquely-notched bifaces, heavy basal grinding	lanceolate knives, leaf-shaped knives, prominent striking platforms, convex unifaces, mutli-directional cores, flake tools	deer, elk, freshwater mollusks, fish	mobile hunter-gatherers	Lehman (EdRk-8); Rattlesnake Hill (EeRh-61); Oregon Jack Creek (EdRi-6)

Table 5. Richards and Rousseau (1987) culture history and associated characteristics.
* uncalibrated radiocarbon dates.

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch. Assemblage	Subsistence	Cultural Traits	Arch Sites
4,500–3,500	Middle	Lochnore Phase	thick unbarbed lanceolate side-notched bifaces	microblades, unnotched and notched leaf-shaped and, bipointed points, notched cobbles, elliptical bifaces, side scrapers, ochre, bone and antler	ungulates, fish, bird	hunter-gatherers with increased sedentism and food storage	Lochnore (EdRk-7); Terrace (EeRl-171); Rattlesnake Hill (EeRh-61); Valley Mine (EcRg-1); Moulton Cr. (EdQx-5); Keatley Cr. (EeRl-7)
3,500–2,400	Late	Shuswap Horizon	large oval and circular housepits, roasting and storage pits, shallow side-notched bifaces with lateral barbs, and concave bases	lanceolate or triangular points, formed unifaces, microblades, shouldered and stemmed bifaces, bone and antler technology	elk, deer, salmon, bird, freshwater mollusks, small game	semi-sedentary fisher-hunter-gatherers	e.g., EcRh-11, EdRk-4, EeRb-10, EfQu-3

Table 5. Continued.

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch. Assemblage	Subsistence	Cultural Traits	Arch Sites
2,400–1,200	Late	Plateau Horizon	smaller oval housepits, roasting and storage pits, bilaterally barbed bifaces with basal and corner notching	microblades and cores, unformed unifaces and bifaces, bone and antler technology, *Dentalium* beads	intensive exploitation of plant (e.g., roots) resources, salmon, ungulates, small game	semi-sedentary fisher-hunter-gatherers	e.g., EdRa-22, EcRh-11, EcRh-12, EdRk-8, EdRk-9, EeRb-3, EeRb-11, EeRb-68, EeRb-70,
1,200– 200	Late	Kamloops Horizon	variability in housepit size/shape, small triangular bifaces with opposing side-notches, multi-notched bifaces	pentagonal bifaces, microblades and cores, ground stone technology, bone and antler, *Dentalium* beads, bark containers	salmon, plant resources, ungulates, small game	semi-sedentary fisher-hunter-gatherers	e.g., EdQs-14, EeQw-1, EeRb-11, EdRk-4, EdRk-5, EdRk-6, EdRk-1

Table 5. Continued.

Faunal remains were limited, but the identification of elk remains led the researchers to interpret these sites as elk processing areas (Rousseau and Richards 1988: 41, 58) (Table 5).

Subsistence for the Lehman Phase was reconstructed from archaeological data identified at the Rattlesnake Hill (deer, salmon, snowshoe hare, and freshwater mussel) and Oregon Jack Creek (elk) sites. The results of Richards and Rousseau's (1985, 1988) investigations at the Oregon Jack Creek site supported Fladmark's (1986), Sanger's (1970), and Teit's (1900) notions that the range of Interior Plateau lifeways consisted of both terrestrial and riverine-oriented strategies centered on the seasonal hunting of ungulates and the harvesting of riverine resources.

Lochnore Phase. The Lochnore Phase was identified by Richards and Rousseau (1987) as the final archaeological unit of the Middle Period. Archaeological excavations of several sites near Ashcroft contributed to three revisions of Sanger's initial model: (1) the Lochnore complex became the Lochnore Phase, (2) the artifact assemblage associated with the Lochnore complex was incorporated into the Lochnore Phase assemblage, and (3) the dates for the Lochnore Phase were changed from ca. 9,000–7,000 to 5,500–3,800 BP (Figure 4; Table 5).

The excavated archaeological sites that contributed to the reassessment and subsequent revision of Sanger's original Lochnore complex included: Terrace (EeRl-171), Housepit 7 at Keatley Creek (EeRl-7), Rattlesnake Hill (EeRh-61), and Valley Mine (EcRg-1B). Surface artifacts attributed to the Lochnore Phase were also recovered from EfRk-1, EfRl-3, and EfRl-5 (Stryd and Hills 1972). Radiocarbon dates from these sites ranged from 5,510 ± 90 BP (EdRg-2) to 3,930 ± 100 BP (EcRg-1B), which were

associated with artifacts assigned to the Lochnore Phase (Arcas Associates 1986) (Appendix C). The Lochnore Phase lithic assemblage included those previously assigned to the Lochnore complex (by Sanger) in addition to: oval bifaces, thick flakes (some with continuous retouch), microblades, and straight lanceolate knives (with or without cortex). Based on several new excavations in the Mid-Fraser Thompson River area (e.g., Valley Mine, Terrace, Lochnore Creek), a new diagnostic point, the Lochnore side-notched point, was proposed, which was characterized as being thick, unbarbed, and lanceolate shaped, with a lenticular cross-section (Stryd and Rousseau 1996: 195).

The Late Period. Both the Early and Middle Period culture history was significantly revised during the 1980s. However, the greatest changes were made to the Late Period. Unlike earlier models proposed by Fladmark (1986) and Sanger (1969), Richards and Rousseau separated the Late Period was into three cultural horizons—Shuswap, Plateau, and Kamloops—that represented the Plateau Pithouse tradition (Figure 4). They relied upon an empirical approach that utilized "...data from virtually every excavated component of the Canadian Plateau" (Richards and Rousseau 1987: 21).

Shuswap Horizon. The initial culture-historical unit proposed for the Late Period, which occurs immediately after the Lochnore Phase, is referred to as the Shuswap Horizon (ca. .3,800–2,400 BP). It was characterized by large oval and circular housepits, and both roasting and storage pits (Richards and Rousseau 1987). The diagnostic artifacts were composed of lanceolate or triangular projectile points with shallow side-notching, lateral barbs, and concave basal margins. The archaeological assemblage includes: formed unifaces, microblades, stemmed points, and bone and antler technology (Richards

and Rousseau 1987). Interpretations of the archaeological assemblages based on elk, deer, salmon, bird, freshwater mollusks, and small game.

Plateau Horizon. Following the Shuswap Horizon, Richards and Rousseau (1987) proposed a second cultural-historical unit—the Plateau Horizon (ca. 2,400–1,200 BP), which is characterized by oval housepits that are smaller than those associated with the earlier Shuswap Phase. The presence of earth ovens and storage pits are also associated with the Plateau Horizon and are thought to have been used to process plant foods for future storage (Carlson 1980: 95–96; Peacock 1998: 328). The artifact assemblage consists of: bilaterally barbed projectile points with basal and corner notching, microblades and cores, unformed unifaces and bifaces, bone and antler technology, and *Dentalium* beads (Richards and Rousseau 1987: 32–34). Subsistence during the Plateau Horizon was focused on the intensive exploitation of plant resources (e.g., fruits, berries, seeds, nuts, and root foods) (Lepofsky and Peacock, in press). In addition, fish, ungulates, and small game were also untilized (Richards and Rousseau 1987: 38–39).

Kamloops Horizon. The final cultural manifestation in the Late Period is the Kamloops Horizon (ca. 1,200–200 BP). This is represented by great variability in housepit size and shape (Richards and Rousseau 1987: 41–42). The artifact assemblage consists of small triangular projectile points with opposing side-notches, pentagonal bifaces, microblades and cores, ground stone technology, bone and antler tools, *Dentalium* shell beads, bark containers, and multi-notched points (Richards and Rousseau 1987: 43–49). Subsistence patterns reflected in the ethnographic and archaeological record indicated that riverine resources, ungulates, small game, and plant resources were exploited (Alexander 1992; Lepofsky and Peacock, in press; Richards and Rousseau

1987: 47–48). The wide range of bone, antler, and organic materials (e.g., bark containers, antler digging stick handles) reflect a greater degree of preservation and visibility associated with Late Period occupation in the Mid-Thompson River region.

CULTURE HISTORY IN THE 1990S

In the 1990s, Arnoud Stryd and Mike Rousseau revised previous culture-historical models and proposed a new sequence for the Mid Fraser-Thompson region. This model followed the work done by Rousseau and Richards (1985) and Richards and Rousseau (1987). This model is the principal one used by researchers today.

Stryd and Rousseau's Culture-Historical Model

Richards and Rousseau's (1987) widely cited cultural-historical sequence for the Late Period has provided the basic framework used for interpreting Canadian Plateau archaeological sites. In 1996, Stryd and Rousseau proposed a revised version of this culture-historical model. Their model incorporated new data from EdRi-11 and evaluated previous interpretations of sites excavated sites a decade earlier (e.g., EeRh-61). A review of the revised culture-historical model proposed for the Mid-Fraser Thompson River region is presented below.

Early Period. Stryd and Rousseau (1996: 179–184) presented a synthetic overview of Early Period archaeological cultures represented in the study area, incorporating elements of the Sanger (1969), Fladmark (1986), and Richards and Rousseau (1987) models. They indicated that surface collections they had examined contained a number of artifacts that could possibly be associated with five widespread early technological traditions: Plano; Early Coast Microblade Complex; Early Stemmed

Point: Old Cordilleran; and the Western Fluted Point (Carlson 1983; Rousseau 1993). As with the previous models, they proposed that Early Period subsistence, land-use, and mobility were characteristic of highly mobile hunter-gatherers.

Early Period archaeological data have come from surface collections and several excavated and dated sites including the Gore Creek, Drynoch and Landels sites (see also Rousseau 1993). First excavated in 1988, the Landels site (EdRi-11) represents the most recently excavated Early Period site incorporated in Stryd and Rousseau's revised culture-historical model (Table 6). This site is located in the Thompson River Region and was interpreted as representing two brief occupations (Rousseau 1991; Stryd and Rousseau 1996: 184). The entire lithic assemblage consisted of microblades and microblade fragments, utilized flakes, one core fragment, and one unformed uniface (Stryd and Rousseau 1996: 184). The faunal assemblage consisted primarily of deer remains that were identified in screened matrices. The sampling for small and/or highly fragmented remains, such as floral remains, did not occur. The site was interpreted as an area where "intensive deer hunting and processing" took place, or as a highly specialized, short-term activity area (Stryd and Rousseau 1996: 184).

Middle Period. Stryd and Rousseau (1996: 185–197) proposed that the Middle Period included two cultural traditions: the Nesikep (ca. 7,000–4,500 BP), and approximately the first 1,000 years of the Plateau Pithouse Tradition (ca. 4,500–3,500 BP) (Table 6). The reconstruction of past environmental conditions as presented by presented by Stryd and Rousseau (1996) and Rousseau (in press) has been has been defined from the current archaeological data, which has been correlated

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch. Assemblage**	Subsistence*	Cultural Traits	Arch. Sites*
11,000–7,000	**Early**	Initial Peopling	large and medium foliate bifaces, pebble choppers and cores	stemmed and fluted points, microblades, unifaces, core fragments	deer, moose, elk, mountain sheep	mobile hunter-gatherers	e.g., EeQw-48, EcRi-1
7,000–6,000	Middle	Early Nesikep	v-shaped corner notches, lateral barbs, parallel to expanding bases and lateral margins, edge grinding	lanceolate points, formed and unformed unifaces, microblades and cores, antler and bone technology, rodent incisors	deer, elk, freshwater mollusks, fish	mobile hunter-gatherers	EdRk-4, EeRh-61
6,000–4,500	Middle	Lehman Phase	thin obliquely-notched bifaces, heavy basal grinding	lanceolate knives, leaf-shaped knives, prominent striking platforms, convex endscrapers, multidirectional cores, unifacially retouched flakes	deer, elk, freshwater mollusks, fish	mobile hunter-gatherers	EdRk-8, EeRh-61, EdRi-6

Table 6. Stryd and Rousseau's (1996) culture history and associated characteristics.
*uncalibrated radiocarbon dates.
** underlined text indicates new data

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch. Assemblage**	Subsistence*	Cultural Traits	Arch. Sites*
4,500–3,500	Middle	Lochnore Phase	thick unbarbed lanceolate side-notched bifaces	pithouses, microblades, leaf-shaped bifaces, microblades, notched pebbles, elliptical bifaces, scrapers, ochre, bone and antler points, awls, wedges and flakers, tooth pendants, shell	ungulates, fish, bird	hunter-gatherers with increased sedentism and food storage	EdQx-41; EdQx-42; EdQx-43; EdRk-7; EeRl-171; EeRh-61, EcRg-1, EdRi-11, EdQx-5, EeRl-7
3,500–2,400	Late	Shuswap Horizon	housepits, roasting and storage pits, bifaces with shallow side-notching, lateral barbs, and concave bases	lanceolate or triangular bifaces, formed unifaces, microblades, shouldered and stemmed bifaces	elk, deer, salmon, bird, freshwater mollusks, small game	semi-sedentary fisher-hunter-gatherers	e.g., EcRh-11, EdRk-4, EeRb-10, EfQu-3

Table 6. Continued.

Years Before Present*	Arch. Period	Arch. Unit	Diagnostic Attributes	Arch Assemblage**	Subsistence*	Cultural Traits	Arch. Evidence
2,400–1,200	Late	Plateau Horizon	smaller oval housepits, roasting and storage pits, bilaterally barbed bifaces with basal and corner notching,	microblades and cores, unformed unifaces and bifaces, bone and antler technology, *Dentalium* beads	intensive exploitation of plant (e.g., shoots) resources, salmon, ungulates, small game	semi-sedentary fisher-hunter-gatherers	e.g., EdRa-22, EcRh-11, EcRh-12, EdRk-8, EdRk-9, EeRb-3, EeRb-11, EeRb-68, EeRb-70, EeRc-44, EcRg-2, EfQv-4, EfQv-19
1,200–200	Late	Kamloops Horizon	great variability in housepit size and shape, small triangular bifaces with side or multi-notching	pentagonally formed bifaces, microblades and cores, ground stone technology, bone and antler tools, *Dentalium* shell beads, bark containers	salmon, plant resources, ungulates, small game	semi-sedentary fisher-hunter-gatherers	e.g., EdQs-14, EeQw-1, EeQw-6, EeQw-15, EeRb-11, EeRc-44

Table 6. Continued.

paleoenvironmental information undertaken by several researchers including Richard Hebda (1982, 1983, 1995) and Rolf Matthews (1985).

Early Nesikep. The Early Nesikep, first proposed by Sanger (1968, 1969, 1970) was refined from the excavation of archaeological sites in the Mid-Fraser Thompson River area (e.g., Rattlesnake Hill; Landels; Fountain; EdQx-42). Sites attributed to the Early Nesikep include the Landels site (see above) and EdQx-42, a multi-component located site near Monte Creek. The latter was investigated by Ian Wilson in 1991 who noted the presence of Lehman and Lochnore Phase components in mixed contexts (Wilson 1992). However, Stryd and Rousseau (1996: 188) reassessed the assemblage and indicated that site consisted of mixed Early Nesikep and Lehman components.

The artifact assemblage assigned to the Early Nesikep by Stryd and Rousseau (1996) included well-made lanceolate barbed or corner-notched bifaces first identified by Sanger (1970). They also noted that the bifaces exhibited straight or recurved lateral margins that are sometimes serrated with a lenticular cross-section (Stryd and Rousseau 1996: 188). They proposed the following characteristics as diagnostic of Early Nesikep: (1) v-shaped corner notching with slight lateral barbs, and expanding basal margins that may be notched; (2) convex or straight basal margins; (3) edge grinding along basal and lateral margins; and (4) microblades (Stryd and Rousseau 1996: 188–189). Resharpening and basal thinning were commonly identified in the assemblages of this tradition (Stryd and Rousseau 1996: 188–189).

Early Nesikep bifaces have been identified throughout the Mid-Fraser Thompson region in various environmental niches, geological contexts, and altitudes (Rousseau, in

Press). The distribution of Early Nesikep sites (often as isolated finds) has been interpreted as indicative of high mobility (Rousseau 1993). The presence of microblade technology throughout the Early Nesikep suggests to some researchers (Rousseau 1993) that a high level of technological skill was present. In addition, the functional flexibility associated with microblades has been used to support the notion that a basic opportunistic foraging strategy occurred throughout the Early Nesikep (Rousseau, in press).

Lehman Phase. Following the Early Nesikep is the Lehman Phase. The bifaces attributed to this phase are somewhat technologically similar to those recovered at Early Nesikep sites. Lehman bifaces remained relatively thin, but changes in shape occurred around 6,000 BP, notably a shift from lanceolate to pentagonal forms with ubliquely situated v-shaped corners or side notches. Lehman components also include tabular, circular scrapers with continuous marginal unifacial retouch, and are convex or "horseshoe-shaped" (Stryd and Rousseau 1996: 189). Microblades were considered to be absent or at least poorly represented. However, this is likely the result of sampling bias. Lithic materials utilized tended to be that of fine-and medium-grained vitreous basalt. Based on the technological orientation identified in Early Nesikep and Lehman Phase artifact assemblages, Stryd and Rousseau proposed that they represent variants of the same culture.

Lochnore Phase. The Lochnore Phase lithic assemblage presented by Stryd and Rousseau (1996) consisted of distinctive moderate to thick bifaces with lenticular to diamond-shaped cross-sections (Stryd and Rousseau 1996: 193). Bifaces were leaf-shaped or lanceolate, unbarbed, exhibiting wide side notching with convex, or pointed

bases; unifaces with almost continuous marginal retouch; and microblade technology were also present (Stryd and Rousseau 1996: 193) (Table 6). Stryd and Rousseau (1996) indicated that notched leaf-shaped/lanceolate points were commonly associated with the first half of the Lochnore Phase in the South Mid-Thompson River region, and that unnotched forms are most commonly identified in the Fraser and Thompson River are during the latter half of the period (Stryd and Rousseau 1996: 193).

Data from EdQx-41, EdQx-42, and the Baker site (EdQx-43) in the South Thompson River Valley added considerable new information to the non-lithic Lochnore Phase artifact assemblage proposed in Stryd and Rousseau's revised culture-historical model. Based on items recovered from these sites (primarily from the Baker site), they added *Olivella* and limpet shell beads, ochre, animal tooth pendants, antler wedges, and flakers, unilaterally barbed antler points, utilized rodent incisors, and bone needles to the Lochnore Phase artifact inventory (e.g., Stryd and Rousseau 1996: 193; Wilson 1991, 1992).

Stryd and Rousseau (1996) argued that the technological orientation exemplified in the Lochnore Phase artifact assemblage was distinctly different from those recovered at Early Nesikep and Lehman Phase sites. They recognized that the thick Lochnore Phase corner-notched bifaces shared more technological and formal similarities with those used by Coast Salishan groups of the Lower Fraser River region. Based on this, they proposed that Early Nesikep and Lehman Phase populations acculturated with the incursion of Coast groups. This resulted in the exchange of culture traits which led to a unique fusion they call the Lochnore Phase/peoples.

Based on archaeological and paleoenvironmental data, Stryd and Rousseau (1996) indicated that the Lochnore Phase represented the initial transition from subsistence strategies that were oriented to a limited resource based to those that were far more broad and varied. Resources available during the Lochnore Phase included a wide range of animals such as beaver, deer, elk, marmot, muskrat, porcupine, rabbit, turtle, duck, eagle, goose, hawk, loon, waterfowl, salmon, sucker, whitefish, and freshwater mollusks (Richards 1978; Sanger 1969: 194; Wilson 1991; Wilson 1992, all cited in Stryd and Rousseau 1996: 196).

RECENT DEVELOPMENTS AND REVISIONS

The culture-historical model proposed for the Canadian Plateau has recently been revisited by Rousseau (in press). This publication not only presents a synthesis of the culture history but briefly explores aspects of Canadian Plateau hunter-gatherer settlement and subsistence and other observations. This section reviews the main concepts presented by Rousseau as they pertain to the development of the Middle Period concept.

In his latest contribution to Canadian Plateau research, Rousseau (in press) presents a summary of the culture historical synthesis that includes an overview of changes in sedentism, mobility, subsistence, settlement, and population estimates for the past 7,000 years. He collectively considers site excavation and survey results, paleoenvironmental data, models of adaptation and culture change, ethnography, interviews with elders, and information shared by researchers over the decades.

Early Nesikep hunter-gatherers have been identified by Rousseau (in press) as representing hunter/gatherer/fishers whose regional population densities were low. Evidence for this comes from small sites, interpreted as short-term occupation areas, that are often found near creeks or rivers and in areas that provided shelter from the elements (Rousseau, in press). Distinctive Early Nesikep bifaces are well made, medium to large lanceolate, corner-notched barbed and shouldered forms that are thought to have enhanced cutting. They are interpreted by Rousseau (in press) as multifunctional and flexible (e.g., knife and spear point) tools. Many Early Nesikep points have been found in isolated contexts throughout the region and do not appear to be concentrated in any particular environmental niche or geological setting. Based on these data, Rousseau (in press) indicates that the high residential mobility is characteristic of Early Nesikep occupations and that the presence of Early Nesikep bifaces isolated finds may be the result of intensive high mobility, hunting-related activities.

Lehman Phase hunter-gatherers are defined by Rousseau (in press) as direct ancestors of the Early Nesikep peoples. He differentiates the two culture groups on the basis of population size and subsistence, biface technology and forms, and other traits. Population size was estimated as slightly higher than at earlier times, which was determined by comparing the small number of artifacts found at Early Nesikep sites to the slightly larger numbers identified at Lehman Phase sites (Rousseau, in press). Protein subsistence during the initial part of the Lehman Phase is thought to have included primarily deer and elk although Rousseau (in press) indicates that a shift toward riverine

resources and the exploitation of resources occurred toward that latter part of the Lehman Phase.

Rousseau (in press) differentiates the Lehman Phase from the Lochnore Phase on the basis of changes in subsistence patterns, technological ability and sophistication, settlement, and diet. He suggests that during the initial stages of the Lochnore Phase, a shift from mobile hunting and opportunistic foraging to a more logistically-organized "collector" strategy that emerged around 4,500 years BP. The collector system allowed forgers to utilize and conserve fish, roots, berries, deer and other resources that provided food during winter months (Chatters 1995; Chatters and Pokotylo 1998).

Rousseau proposes that during the Lochnore Phase, subsistence resources were abundant and varied unlike those of earlier times (Rousseau, in press). Decreased residential mobility, increased specific task-group mobility, and larger populations are proposed for the Lochnore Phase, which is attributed, in part, to the wide range of seasonal temperatures that may have prompted people to congregate at lower elevations areas during the winter months. The 4,400-year-old Baker housepit site is used to support the hypothesis that the Lochnore Phase represents a transition from highly mobile to less mobile lifeways (Rousseau, in press).

An important point presented by Stryd and Rousseau (1996) is the assertion that the Lehman peoples were direct ethnic and biological descendants of the Early Nesikep peoples whereas Lochnore culture represents the commingling of resident groups with Coast Salishan people—and their convergence in to a unique cultural pattern. They indicate that direct contact between Plateau and Coastal groups occurred by

approximately 4,500 and that mutual acculturation and the melding of the two cultures is evidenced by the occurrence of pithouses, the use of more "sophisticated" or complex subsistence technologies, and some scheduled resource collection (Rousseau, in press). This has been a point of contention with some researchers such as Wilson (1992) and most recently Prentiss and Kuijt (in press) who propose that there is cultural continuity between the Early Nesikep/Lehman Phase and the Lochnore Phase.

Prentiss and Kuijt (in press) indicate that there are technological similarities in Middle Period lithic assemblages recovered from several sites in the Canadian Plateau (e.g., Landels, Oregon Jack, Rattlesnake Hill). They indicate that blade technology and maintainable tools, such as formed bifaces and unifaces, are commonly recovered from Middle Period sites and are not specific to any particular cultural manifestation (Prentiss and Kuijt, in press). Although they do not refute the fact that differences exist in the artifact assemblages recovered from these sites (e.g., a high incidence of expedient tools), they maintain that the differences do not provide sufficient data to reflect cultural replacement during the Middle Period (Prentiss and Kuijt, in press).

Rousseau (in press) refutes Prentiss and Kuijt's (in press) standpoint by reviewing the formal and technological differences between the Lehman and Lochnore lithic assemblages. He indicates that biface manufacture, uniface forms, and the types of raw materials used are far too different for each phase to represent the same culture group (Rousseau, in press).

The adaptive strategies employed by the Middle Period hunter-gatherers with respect to subsistence, settlement, and technological capability continues to challenge

researchers. The arguments made by Rousseau (in press) and by Prentiss and Kuijt (in press) are attempting to address the diversity characteristic of the Middle Period. However, the paucity of excavated and analyzed archaeological data from sites in the Mid-Mid-Thompson River region has led to difficulties in reconstructing how hunter-gatherers adapted to climatic and environmental change during the Middle Period.

DISCUSSION

Implicit in the culture-historical models summarized in this chapter are three key issues. The first is that subsistence strategies proposed for the Middle Period have been inferred from both faunal evidence and lithic artifact assemblage composition and the extrapolation of paleoenvironmental data. The second is that Middle Period settlement patterns have been interpreted on the basis of climate change, artifact assemblage composition (e.g., artifact density), and site distribution patterns. The third is that each of the published culture-historical models presented for the Canadian Plateau are organized within the parameters of the tripartite classification scheme originally developed by Willey and Philips (1958).

Middle Period subsistence as proposed by Canadian Plateau researchers indicates a diet primarily centered on large game such as ungulates. Paleoenvironmental data indicate that extensive grasslands characterized much of the Middle Period landscape, which favored these mammals and allowed their proliferation (Hebda 1982). The underlying theory regarding the interpretation of Middle Period subsistence is that hunter-gatherers extracted resources systematically from their environment and that the

amounts and range of resources utilized are related to environmental factors. The composition of lithic and faunal artifact assemblages identified at Middle Period sites in the region have also influenced in to how subsistence has been interpreted. The presence of artifacts that were reused, such as the well-crafted Early Nesikep bifaces, are often inferred to represent technology aimed at exploiting larger resources such as elk and deer (e.g., Stryd and Rousseau 1996).

Biface morphology has also been used by researchers to determine change in subsistence strategies. For example, the shift from the thin, corner- notched point styles associated with the Early Nesikep and Lehman Phase to the thick, side-notched Lochnore points has been inferred as representing changes in subsistence (e.g., Richards and Rousseau 1987; Stryd and Rousseau 1996; Rousseau, in press). Moreover, these thick Lochnore point styles have been identified by some researchers as possessing morphological characteristics similar to those identified at sites in the Northwest coast, which has implications when reconstructing hunter-gatherer land-use, mobility, technology, and the diffusion of cultural traits.

Middle Period land use and mobility have been interpreted on the basis of resource availability that is related to climate change. In addition, the types of features and composition of artifact assemblages at Middle Period sites have also been used to interpret land use and mobility. Paleoclimatic reconstructions for the region indicate that changing climate conditions associated with the later part of the middle Holocene, which led to an changes in flora and fauna (Hebda 1982, 1995). Archaeological sites attributed the later stages of the Middle Period (e.g., EdQx-41 and EdQx-42) often consist of

densely concentrated materials, which have increased the range of artifacts (lithic, bone, and antler) attributed to the Middle Period (Stryd and Rousseau 1996: 193). These sites have been interpreted as representing decreased mobility and changes in land-use patterns during the Middle Period (e.g., Richards and Rousseau 1987).

The definition and refinement of the culture-historical model for the Canadian Plateau has influenced our understanding of the Middle Period archaeological record and generalized hunter-gatherer behavior. For example, the Middle Period has been interpreted as representing two cultural traditions: the Nesikep and the Plateau Pithouse (e.g., Stryd and Rousseau 1996, Rousseau, in press). Traditions are characterized by similarities in subsistence strategies, settlement patterns, and technological orientation (Willey and Philips 1966: 4), which are inferred from archaeological and paleoenvironmental data. Thus, as new data are recovered, and new methods of interpretation emerge, the culture-historical model is likely to be revised. The next chapter provides an overview of the Middle Period archaeological sites located in the Mid-Thompson River region some that have been incorporated into the regions published culture history

— CHAPTER 5 —

THE UNPUBLISHED ARCHAEOLOGICAL RECORD OF THE MID-THOMPSON RIVER REGION

The previous chapter presented an historical overview of the published culture-historical models that have been used to interpret and reconstruct Middle Period lifeways for the Mid-Mid-Thompson River region. These models were based on information recovered through academic and selected CRM-based research projects that have taken place over the past four decades. The culture-historical models are published and widely accessible in journals, such as the *Canadian Journal of Archaeology*, and in edited volumes (e.g., Carlson 1996) and monographs (e.g., Richards and Rousseau 1987).

The results of the CRM projects that have been undertaken in the province are often unpublished and thus not readily accessible. These unpublished reports are often referred to as the "grey literature"—a somewhat nebulous body of hundreds of reports on CRM research projects that have occurred throughout the province over several decades. The limited access to these reports, which are generally available only at the Archaeology Branch in Victoria or from consulting archaeological firms, has effectively discouraged the overall use of these data.

The majority of archaeological sites identified during CRM projects have not been excavated. This reflects the nature of CRM, where the primary objective is to

inventory and mitigate potential impacts of development by avoidance. Nevertheless, these sites have been protected on the assumption that they may be revisited and examined in the future.

This chapter begins by describing the research methods employed in this study. This is followed by a summary of the research at 17 archaeological sites in the Mid-Thompson River region that had been assigned to the Middle Period by CRM or academic archaeologists. Also presented are fourteen archaeological sites that contract archaeologists have tentatively assigned to the Middle Period are then described. I conclude the chapter with a discussion of some of the issues that frame reconstructions of the Middle Period.

THESIS RESEARCH METHODS

The methodological approach employed in this research involved reviewing and synthesizing published texts (e.g., journal articles) that dealt specifically with archaeological site data and interpretations of Middle Period hunter-gatherers in the Mid-Thompson River area. In addition, I also synthesized unpublished texts (e.g., consulting archaeological reports) from sites located in the Mid-Thompson River area. The primary objective was to achieve a better understating of what is currently known about these hunter-gatherers.

After completing the review of published texts I contacted a project officer at the British Columbia Archaeology Branch and placed a formal request for documentation relating to unpublished contract reports, their dates, and author(s). In the second stage, I

reviewed the sources and compiled a list of CRM reports containing Middle Period archaeological sites and/or components that had been identified by the initial researchers while undertaking investigations in the Mid-Thompson River region. In the third stage I reviewed the unpublished contract reports. The final stage involved a synthesis of the data collected from the unpublished reports. The synthesis involved dividing sites into categories such as: single component and multiple component sites, sites with radiocarbon dates available, sites with diagnostic bifaces present. These categories facilitated comparison and assisted in providing the general characteristics associated with known Middle Period sites in the Mid-Thompson River region.

Over the course of several months, 128 contract archaeology reports were examined. These reports presented the results of archaeological investigations that had taken place in the Thompson River region between 1962 and 2000 that referred to Middle Period sites. This research resulted in the identification of 31 archaeological sites that were assigned by the original researcher (s) to represent Middle Period cultural affiliations. Fourteen of which were determined to represent Middle Period occupations on the on the basis of geological and biophysical inference alone. Seven of the 31 archaeological sites were identified in academic research project reports.

MIDDLE PERIOD ARCHAEOLOGICAL SITES IN THE MID-THOMPSON RIVER REGION

Of the 31 sites identified in this study, 17 were definitively assigned to the Middle Period by the original researcher and are reviewed in this section. The Middle Period archaeological sites summarized here are organized into two groups: single component

sites and multiple-component sites. *Single component*, as presented here, indicates that researchers determined the presence of only one archaeological unit at the site area, whereas *multiple-component* refers to the identification of two or more distinct archaeological units. Archaeologists may view these sites in different ways. Single component sites are defined by criteria relating to type, age, or cultural affiliation that corresponds best with the artifact assemblage. This is because such sites have not been subjected to disturbance by later occupations. Thus, these contexts may serve as evidence of a particular occupation that is temporally and spatially confined. One the other hand, multiple component contexts may provide limited information on discrete assemblages, especially in cases where stratigraphic integrity of the site has been compromised by later occupations where mixing has occurred. However, since they do contain evidence of areas that were repeatedly used in the past, they may provide insight into the sorts of environmental settings and general technological orientation of artifact assemblages that were utilized by hunter-gatherers.

For each site, I summarize the geophysical setting, artifact assemblage (including lithic, faunal, floral), and site interpretation. It should be noted that the summaries that follow are organized by the site interpretations presented by the original researchers in unpublished contract or academic reports. Critiques of specific methodology employed at each site are not included. In addition, radiocarbon dates presented both in this chapter and in Appendix C are not calibrated as culture historical models presented for the region have been based on uncalibrated dates.

Single-Component Sites

Three single component Middle Period archaeological sites have been identified in the Mid-Thompson River region through CRM projects. EdQx-41, EeQx-5, and EeRh-3, were attributed to the Lochnore Phase while EeRh-3 was assigned to the LehmanPhase (Table 7). These sites are located in either the river valley or river terrace environmental zones (Figure 5).

EdQx-41. In 1991, EdQx-41 was identified through subsurface testing, initiated by I. R. Wilson. The site is situated on a glaciolacustrine river terrace that overlooks the South Thompson River to the north. The subsurface archaeological assemblage consisted of debitage, bone unipoints, bone awls, freshwater mussel shell, and worked rodent incisors (Wilson 1991). The side-notched, bipointed, and leaf or lanceolate-shaped projectile points were attributed to the Lochnore Phase (Table 7). This evidence, coupled with freshwater mussel shell dated to 5,100 ± 100 BP and 5,480 ± 110 BP, was used by Wilson (1991: 68) as evidence that the site was seasonally occupied throughout the Lochnore Phase.

EeQx-5. Morley Eldridge recorded EeQx-5 in 1974 during a surface inspection. This site is located on a glaciolacustrine river terrace adjacent to the Thompson River (Figure 4). The artifact assemblage was limited to lithic material that consisted of leaf-shaped bifaces and debitage situated above and below a layer of Mazama ash. Recent study indicates that the Mazama explosion occurred at 6,700 BP (Hallett et al. 1997). EeQx-5 was assigned to the Lochnore Phase by Eldridge based on the identification of an un-notched, leaf-shaped/lanceolate point, which had a lenticular cross-section and

Borden Number	Field Methods	Assemblage	Diagnostic Attributes	Biophysical Setting	Interpretation	C14 Dates *	Source
EdQx-41	Subsurface testing	subsurface lithic debitage, bone unipoints, bone awls, worked rodent incisors	Lochnore Phase: side-notched, bipointed, leaf/lanceolate shaped bifaces	broad alluvial terrace; Bunchgrass zone	Lochnore Phase: seasonal occupation	5100 ± 100 3480 ± 110	Wilson 1991
EeQx-5	Surface inspection	leaf-shaped bifaces, lithic debitage above and below Mazama Ash	Lochnore Phase: lanceolate bifaces with lenticular cross-section (un-notched), denticulate edge	Glacio-lacustrine river terrace; Bunchgrass zone	Lochnore Phase		Eldridge 1974
EeRh-3	Surface inspection	dense lithic scatter	Lehman Phase: pentagonal biface thin with v-shaped notches	terrace Bunchgrass zones	Lehman Phase: campsite Arrowstone quarry		Lawhead 1979

Table 7. Single component Middle Period archaeological sites within the Mid-Thompson River region.
• uncalibrated radiocarbon dates.

denticulate lateral margins below a layer of Mazama ash. The ash layer at the site was used to provide the minimum date for the age of the point.

EeRh-3. Steven Lawhead identified EeRh-3 in 1979 during the surface examination of a raised terrace feature overlooking the Thompson River to the south. EeRh-3 consists of a single, thin, pentagonal point with v-shaped corner notching associated with a dense lithic scatter. Based on point morphology, the site was interpreted as a Lehman Phase campsite that may have been associated with the nearby Arrowstone Hills quarry (Lawhead 1979).

Multiple Component Archaeological Sites

Fourteen multiple-component Middle Period archaeological sites have been identified in the area through both CRM and academic projects. This section begins with a review of those Middle Period archaeological sites for which radiocarbon dates were used to determine occupation age. This is followed by those sites that were attributed to the Middle Period based on the presence of diagnostic artifacts. The last series contains a description of those sites for which both middle Holocene dates and Middle Period diagnostic artifacts are present. It is important to note that because each of these sites has been identified as multiple components sites, it may sometimes be difficult to attribute particular artifacts to particular components. All of the sites described below are located in either the river valley or river terrace environmental zone with the exception of EeRc-1B, which is located in Montane Forest environmental zone and in the sub-Boreal Pine Spruce biogeoclimatic zone (Figure 5).

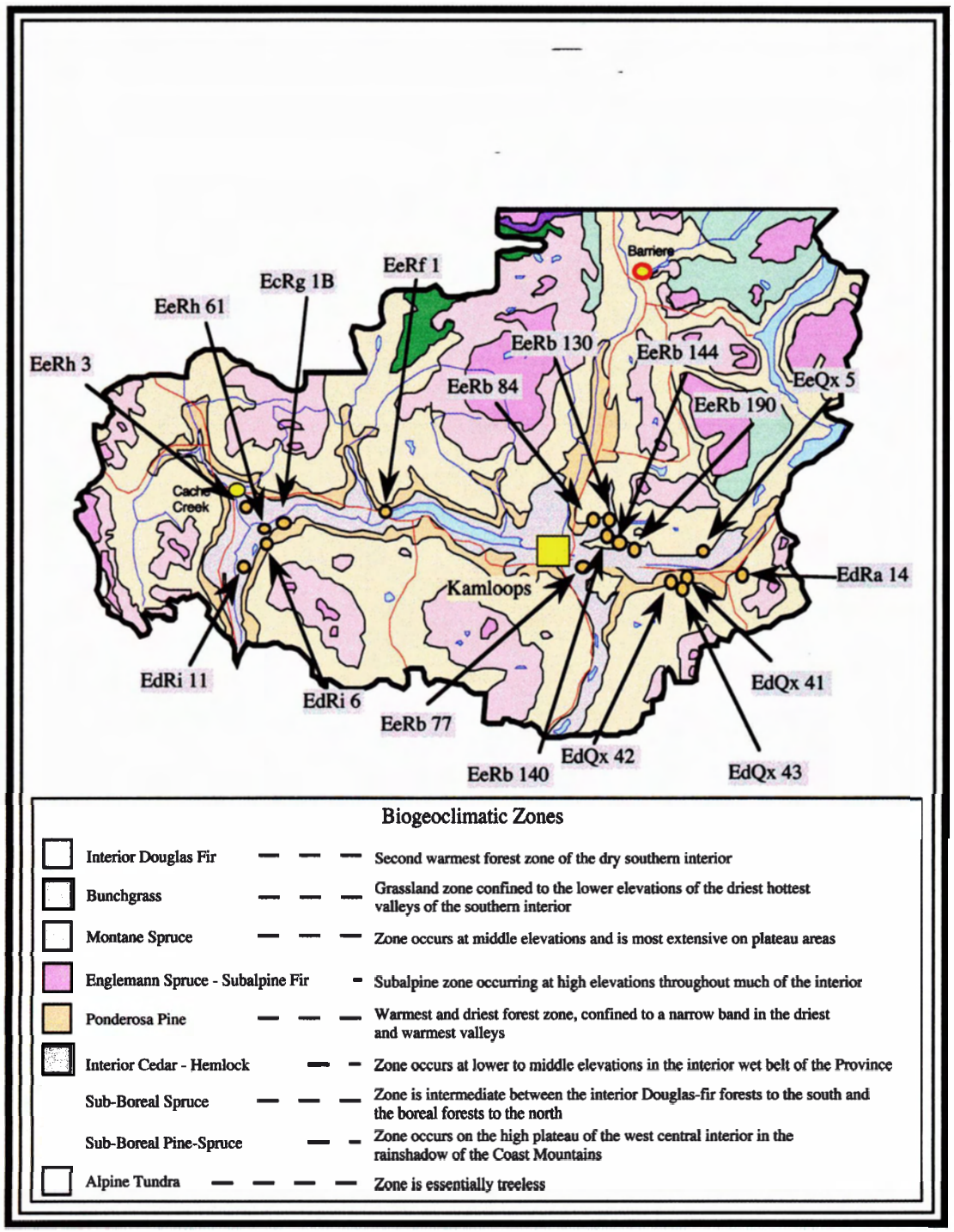

Figure 5. Middle Period archaeological sites located within the Mid-Thompson River region (NTS 1:2,000,000 Provincial Index Map with biogeoclimatic references from Meidinger and Pojar 1991: 50, used with permission).

EdQx-42. This site was first identified in 1978 during a large-scale inspection of archaeological resources located in the South Thompson River Valley. It is situated at the eastern extent of an alluvial fan terrace feature, overlooking the South Thompson River to the north (Wilson 1991).

In 1990, subsurface testing by I.R. Wilson resulted in the identification of dense concentrations of lithic debitage associated with formed tools. Radiocarbon dates of 5,920 ± 131 BP and 6,290 ± 100 BP were derived from carbonate samples (Wilson 1991: 104). Based on this and the presence of freshwater mussel shell (which is often recovered at Early Nesikep or Lehman Phase sites in the region), Wilson (1991) indicated that both Lehman Phase and Lochnore Phase occupations were likely represented (Table 8). Microblades were also present.

The non-lithic artifacts attributed by Wilson to the both Lehman Phase and Lochnore Phases included: bone splinter awls, formed bone unipoints, bone needles, antler unipoints, *Olivella,* and limpet shell beads (Wilson 1991). Of the faunal remains identified, turtle was most well represented, followed by freshwater mussel shell. A wide range of bone and antler artifacts was identified at the site. Of the faunal remains identified, turtle was most well represented, followed by freshwater mussel shell.

Wilson (1991) interpreted EdQx-42 as an area that was occupied during the Lehman and Lochnore Phases on the basis of lithic analysis and radiocarbon dating (Appendix C). A subsequent analysis of the lithic assemblage by Stryd and Rousseau (1996: 193) identified an Early Nesikep component. Late Period components were also identified at the site and were assigned to the Plateau and Kamloops Horizons.

Borden Number	Field Methods	Assemblage	Diagnostic Attributes	Biophysical Setting	Interpretation	C14 Dates BP*	Source
EdQx-42	Subsurface testing	lithic debitage, formed and unformed bifaces and unifaces, microblades, bone splinter awls, formed bone unipoints, bone needles, antler unipoints, *Olivella* and limpet shell beads, turtle, freshwater mussel shell		broad alluvial terrace; Bunchgrass zone	Lochnore Phase and Lehman Phase: spring base camp that was occupied throughout the Middle Period Early Nesikep	5920 ± 130 6290 ± 100	Wilson 1990
EdRi-11	Academic Excavation	microblades, unformed unifaces, utilized flakes, core fragments of deer bone		terrace; Ponderosa Pine and Bunchgrass zones	Lochnore Phase and Early Nesikep: deer hunting, and deer processing activities	5840 ± 70 3520 ± 70	Rousseau 1988, 1989

Table 8. Multiple component sites Middle Period sites assigned from radiocarbon dates. M. Rousseau (pers. comm. 2004) identified diagnostics at these sites.

• uncalibrated radiocarbon dates.

EdRi-11. Excavated in 1988 by Mike Rousseau, EdRi-11 is located in the Oregon Jack Creek Valley. The site is situated on a terrace feature west of the Thompson River. The excavation revealed a dense concentration of formed and unformed bifaces and unifaces, as well as cores and microblades. Rousseau (1993; in press) tentatively assigned the site to the Lochnore Phase (Table 8).

Additional work by Rousseau in 1989 and 1990 indicated that Early Nesikep and Lochnore Phase components were present. The first and oldest component was. characterized by microblades and deer bone fragments, which are associated with a series of radiocarbon dates that ranged from 7,600 to 8,500 BP (Rousseau 1993) (Appendix C). This occupation was interpreted as an Early Nesikep occupation and represents the earliest excavated and dated evidence of microblade technology on the Canadian Plateau (Stryd and Rousseau 1996: 184). Activities taking place were attributed to deer hunting and processing (Table 8).

The second occupation of EdRi-11 was characterized by microblades, utilized flakes, lithic debitage, unformed unifaces, and a core fragment (Rousseau 1991: 98, 100). Deer and muskrat bone were also noted (Rousseau 1991). This component was assigned to the Lochnore Phase based on radiocarbon dates that ranged from ca. 3,400 to 5,950 BP

EdRi-6 This site, also known as the Oregon Jack Creek site, was excavated by Thomas Richards and Mike Rousseau in 1987. This site is located on a glaciolacustrine river terrace west of the Thompson River (Figure 5). The excavation resulted in the identification of multidirectional cores, along with elk bone and freshwater mussel shell (Rousseau and Richards 1988: 50–57). Proximal biface fragments were characterized by v-shaped notching with moderate to heavy edge grinding along both basal and lateral

Borden Number	Field Methods	Archaeological Assemblage	Diagnostic Attributes	Biophysical Setting	Interpretation	Source
EdRi-6	Subsurface testing/ Excavation	unifaces, and bifaces, lithic debitage, bipolar and multidirectional cores, elk bone, and freshwater mussel shell	Lehman Phase: v-shaped notching, moderate to heavy edge grinding along the basal-lateral and basal margins	terrace within the Ponderosa Pine and Bunchgrass zones	Lehman Phase: single occupation, where elk butchering may have been the primary activity	Richards and Rousseau 1987
EeRb-84	Subsurface testing	small lithic scatter	Early Nesikep: stemmed, with a concave base and denticulate margins	terrace within the Ponderosa Pine and Bunchgrass zones	Early Nesikep: hunting stand	Arcas 1992
EeRb-130	Academic Excavation	formed and unformed unifaces, and bifaces, lithic debitage. freshwater mussel shell	Lochnore Phase point base leaf-shape with lenticular cross section	glacio-lacustrine river terrace; Bunchgrass zone	Lochnore Phase: Late Period represented	Nicholas 1991, 1995, 1996
EeRb-140	Academic Excavation	microblades, formed and unformed bifaces, incised, notched, polished and perforated bone, ochre, dentalium shell	Early Nesikep: thin point exhibited v-shaped corner notching, lateral barbs, basal thinning, and basal grinding	glacio-lacustrine river terrace; Bunchgrass zone	Early Nesikep: Late Period represented (mixing?)	Nicholas 1994–1996, 2000

Table 9. Multiple component Middle Period sites with no radiocarbon dates.

margins. The archaeological assemblage at this site was used to define the Lehman Phase (Richards and Rousseau 1988: 56). The site was interpreted as a single-use area where elk butchering may have been the primary activity (Table 9). A Late Period occupation was also identified at the site on the basis of subsurface lithics and cultural depressions

EeRb-84. In 1992, Arcas identified EeRb-84 during an archaeological site inventory assessment conducted in the Scheidam Flats area, located approximately 15 km northwest of the confluence of the North and South Thompson Rivers (Figure 5). An.Early Nesikep Tradition diagnostic projectile point, associated with a small lithic scatter, was recovered from the surface of the stream terrace on which the site is located (Table 9). The stemmed projectile point section had a concave base and denticulate margins. Subsurface investigation did not reveal further archaeological evidence. The site has been interpreted as a "hunting stand" (Arcas 1992).

EeRb-130. This site is situated on an intermediate glaciolacustrine terrace remnant located on the north side of the South Thompson River (Figure 5). George Nicholas andparticipants in the 1991 SFU/SCES field school identified the site during a surface inspection conducted on the river terraces that line the South Thompson River. Subsurface testing was conducted in 1991, 1995, and 1996. Cultural materials initially noted included lithic debitage, charcoal, fire-altered rock, bone fragments, and freshwater mussel shell, in addition to a variety of unformed and formed tools including diagnostic projectile points attributable to the Middle and Late Periods (i.e., Lochnore point base). Side-notched cobbles were also recovered from the site. Shovel testing and eight $1m^2$ excavation units were used to better define site boundaries and cultural chronology and

particularly to isolate the earlier components. Nicholas indicates the site was occupied during the Middle and Late periods.

EeRb-140. This site is situated on an intermediate glaciolacustrine terrace remnant located on the north side of the South Thompson River (Figure 5). George Nicholas and participants in the 1991 SFU/SCES field school identified the site during a survey of the river terraces that line the South Thompson River. In 1993, an intensive excavation was initiated by Nicholas that included excavation of 30 $1m^2$ units and paleoethnobotanical sampling where several thousand litres of soil was removed for flotation. This investigation was completed by additional excavation of 28 m^2 in 2000, after which the site was largely destroyed by golf course development.

Rigorous subsurface testing and detailed excavations at EeRb-140 resulted in the identification of dense concentrations of lithic debitage, formed and unformed bifaces and unifaces, microblades (complete and fragments), biface preforms, utilized flakes, and perforators, along with incised, notched, polished and perforated bone, ochre (red and yellow), and dentalium shell (Nicholas et al. 1997). Dense concentrations of microblades were present throughout the entire site area. Late Period occupations were identified at the site that were considered responsible for the apparent mixing with archaeological deposits from earlier occupations. It was not possible to, at least in some parts of the site, to isolate the Middle Period from the Late Period archaeological assemblage.

An Early Nesikep component was tentatively identified in 2000 with the discovery of a thin projectile point with v-shaped corner notching, lateral barbs, basal thinning, and basal grinding (Table 9). Although there are no radiocarbon dates that correlate with the Early Nesikep component recovered from EeRb-140, several sites in

the immediate vicinity are associated with occupations that predated 6,000 BP (e.g., EeRb-190, EeRb-144, EeRb-77). Nicholas has interpreted EeRb 140 as seasonally occupied during the spring and fall months throughout the Middle and Late periods

EeRb-190. This site was identified in 1991 during an archaeological resource inventory conducted by George Nicholas and the SFU/SCES field school. EeRb-190 is situated on a slumped glaciolacustrine river terrace, on the north side of the South Thompson River (Figure 5). Salvage excavation in 1996 resulted in the identification of lithic debitage and a leaf-shaped point associated with a cluster of freshwater mussel shell at approximately 55 cm below surface that provided a date of 6,190 ± 80 and may represent an Early Nesikep component (Table 10). The shell and leaf-shaped biface were located well below the Plateau Horizon. The site has since been destroyed.

EeRh-61. This site, also known as the Rattlesnake Hill site, is situated on a glaciolacustrine river terrace on the south margins of the Thompson River (Figure 5). In 1985, Arcas Consulting Archeologists Ltd. initiated a backhoe excavation at the site prior to the construction of a railway tie preservation plant. The excavation led to the identification of Early Nesikep and Lehman Phase components.

The artifact assemblage included unifaces and bifaces (formed and unformed), microblades, microblade cores, and debitage (Arcas 1985). Diagnostic bifaces included well-made, thin, lanceolate outlined bifaces with v-shaped corner notching and lateral barbs, with evidence of edge grinding and basal thinning, and straight to recurved lateral margins (Table 10) (Arcas 1985). The Early Nesikep attribution was based on these points and a radiocarbon date 5,870 ± 500 BP that was obtained from a charcoal sample (Arcas 1985) (Appendix C).

Borden Number	Field Methods	Assemblage	Diagnostic Attributes	Biophysical Setting	Interpretation	C14 Dates BP*	Source
EeRb-190	Salvage/ Excavation	lithic debitage associated with freshwater mussel shell	Early Nesikep: leaf-shaped biface	glaciolacustrine river terrace; Bunchgrass zone	Early Nesikep? and Late Period	below a date of 6190 ± 80	Nicholas 1996
EeRh-61	Excavation	unifacially retouched flakes with cortex, leaf-shaped bifaces with prominent platforms, thick circular scrapers, multidirectional flake cores, deer and elk remains (microblades absent)	Lehman Phase: thin, pentagonal with v-shaped corner or side notched bifaces. Early Nesikep: well-made, thin, lanceolate with v-shaped corner notches, lateral barbs, edge grinding, basal thinning, straight to recurved lateral margins	glaciolacustrine river terrace within the Ponderosa Pine and Bunchgrass zones	Lehman Phase (multiple occupation area) and Early Nesikep	5940 ± 120 5870 ± 500	Arcas 1984, 1985
EeRb-77	Academic Excavation	lithic debitage, retouched flakes, leaf-shaped bifaces, formed unifaces	Lochnore and/or Lehman Phase: side-notched biface	floodplain; Bunchgrass zone	Lochnore and/or Lehman Phase	6210 ± 60 6560 ± 90	Nicholas 1991, 2002

Table 10. Middle Period archaeological sites within the Mid-Thompson River region assigned from diagnostic artifacts and radiocarbon dates.

* uncalibrated radiocarbon dates.

Borden Number	Field Methods	Assemblage	Diagnostic Attributes	Biophysical Setting	Interpretation	C14 Dates BP*	Source
EdRa-14	Subsurface testing/ Excavation	microblades, utilized flakes, formed unifaces, microblades and cores, multidirectional cores, formed bifaces, awls, bird bone, single salmon vertebrae, reptiles, freshwater mussel shell	Lochnore Phase: leaf-shaped or lanceolate, unbarbed, bi-pointed projectile points. Early Nesikep: thin in cross-section, with expanding stems, stem grinding, and concave bases	terrace; Ponderosa Pine and Bunchgrass zones	Lochnore Phase and Early Nesikep: lithic maintenance undertaken by generalized foragers	5750 ± 60 4940 ± 50	Eldridge and Robinson 1992
EdQx- 43	Subsurface testing/ Excavation	lithic debitage, utilized flakes, unifaces, biface fragments, bone awls, antler wedge, rodent incisor, keyhole limpet shell bead, freshwater mussel shell, bird, fish	Lochnore Phase: side-notched biface fragment (basal and lateral edge grinding), obliquely-angled scrapers Lehman Phase: lanceolate bifaces with edge grinding, continuous retouch	broad alluvial terrace; Bunchgrass zone	Lochnore and Lehman Phase Zone I: short-term occupation; Zone II: short term, occupation; Zone III: fall and spring occupations throughout Middle Period	4450 ± 100 4350 ± 90 4260 ± 90 4240 ± 120	Wilson 1991, 1994

Table 10. Continued.

Borden Number	Field Methods	Assemblage	Diagnostic Attributes	Biophysical Setting	Interpretation	C14 Dates BP*	Source
EeRb-144	Academic Excavation	bone unipoints, awls, modified bone, beaver incisor, freshwater mussel shell, deer, salmon bone, fish otoliths, *Olivella* and dentalium shell, bifaces, notched cobbles, lithic debitage, microblades, and deer remains	Lochnore Phase: leaf shaped unbarbed, side notched projectile points with heavy edge grinding, notched cobbles. Lehman Phase: thin, well-crafted v-shaped corner notched projectile points with heavy edge grinding, lanceolate knife	glaciolacustrine river terrace; Bunchgrass zone	Lochnore Phase and Lehman Phase	5810 ± 50 5810 ± 50 5250 ± 50 5170 ± 60 4080 ± 80	Nicholas 1998–2002
EcRg-1B	Subsurface testing	lithic debitage, microblades	Lochnore Phase: corner-notched biface fragment	lacustrine terrace; Sub Boreal Pine Spruce zone	Lochnore Phase: lake oriented	5390 ± 90 5490 ± 190\ 4750 ± 190\ 3930 ± 100	Arcas 1985

Table 10. Continued.

Borden Number	Field Methods	Assemblage	Diagnostic Attributes	Biophysical Setting	Interpretation	C14 Dates BP*	Source
EeRf-1	Salvage/ Excavation	foliate bifaces, microblades and microblade cores, thick unifaces, unifacially retouched primary reduction flakes, and multidirectional cores bone awls, freshwater mussel shell, deer, elk, beaver	Lochnore Phase: thick, side notched, bipointed points (bi-convex cross-section and edge grinding), notched cobbles. Lehman Phase thin, obliquely notched, pentagonal points that are bi-convex in cross-section with basal thinning, exhibiting heavy edge grinding. Early Nesikep: thin, v-shaped corner notching, and convex bases	glaciolacustrine river terrace; Bunchgrass zone	Lochnore Phase, Lehman Phase and Early Nesikep; seasonal camp with activities centered on lithic tool maintenance and manufacture	5670 ± 60 5390 ± 60 4310 ± 60 4310 ± 60 4220 ± 70	Bussey 1994

Table 10.Continued.

The Lehman Phase archaeological assemblage at EeRh-61 consisted of relatively thin, pentagonal projectile points with obliquely oriented, v-shaped corner or side notching, unifacially retouched flakes with cortex, leaf-shaped bifaces with prominent platforms, thick circular scrapers, multidirectional flake cores, debitage, and deer and elk remains (Arcas Associates 1985). Microblades were not associated with the Lehman components (Table 10). The radiocarbon dates associated with the Lehman assemblage ranged from ca. 4,3100 to 6,050 BP (Appendix C).

A Lochnore Phase component was also identified, which was represented by the presence of several bipointed, side-notch bifaces characteristic of other Lochnore assemblages recorded in the region. Side-notched cobbles were also identified, which have been interpreted as possible net sinkers that were part of fishing-oriented tool kits. Overall, the investigations at EeRh-61 helped to refine the Lehman Phase archaeological assemblage. (Arcas 1985). At the time, EdRh-61 was the first southern interior archaeological site that contained multiple radiocarbon dates prior to 4,000 BP (Appendix B).

EeRb-77. EeRb-77 is located on the floodplain of the South Thompson River (Figure 5). The eastern margin of the site was excavated by George Nicholas and students participating in the 1991 SFU/SCES field school. The excavation resulted in the identification a Middle Period component that consisted of lithic debitage associated with charcoal dated to 5,590 ± 100 BP at 2.5 metres below datum (Appendix C). Cultural material in that unit continued to over 3 metres below datum.

In 2002, Nicholas and the SFU/SCES field school systematically excavated a portion of the site adjacent to the 1991 test area in the northeastern part of the site. These

efforts resulted in the identification of lithic debitage, utilized and retouched flakes, leaf-shaped bifaces, steeply-angled unifaces, and a side-notched biface with possible Lehman Phase and/or the Lochnore Phase affiliations (Table 10). Bone technology was well represented by awls, needles, and points although this is likely associated with Late Period mixing. Although the excavation did not result in the identification of any definitive Middle Period diagnostic points, two recently obtained radiocarbon dates 6,210 ± 60 and 6,560 ± 90 BP derived from charcoal samples (255–260 cm and 285–290 cm bd) further document the Middle Period occupation at the site (Appendix C). Cultural deposits identified below 290 cm have yet to be dated and may provide evidence of an earlier occupation at the site.

EdRa-14. Identified by Richard Brolly in 1992, EdRa-14 is situated on a raised alluvial terrace feature overlooking the South Thompson River to the north (Figure 5). In 1997, Kevin Robinson and Morley Eldridge revisited the site and initiated a mitigative excavation in response to impacts associated with upgrades to the Trans-Canada Highway.

The systematic excavations resulted in the identification of densely concentrated lithic debitage and artifacts (Robinson and Eldridge 1998: 44). The lithic assemblage consisted of utilized flakes, formed unifaces, microblades, and microblade cores, multidirectional flake cores, formed bifaces, and awls/perforators (Table 10). The faunal assemblage consisted primarily of deer remains. However, bird, a single salmon vertebrae, reptile, amphibian, and freshwater mussel shell were also identified (Eldridge and Robinson 1988: 43). A Late Period occupation was also identified at EdRa-14.

An Early Nesikep occupation was inferred on the basis of the recovery of thin, well-crafted bifaces with expanding stems, stem grinding, and concave bases (Eldridge and Robinson 1998). The distribution of microblades was not limited in terms of their depth and overall presence at the site. A Lochnore Phase component was also identified at the site. The Lochnore diagnostics consisted of unbarbed, bi-pointed leaf-shaped projectile points (Eldridge and Robinson 1998). Two radiocarbon dates of 5,750 ± 60 and 4,940 ± 50 years BP were derived from bone collagen samples at approximately 60 cm below datum (Appendix C). The diverse, albeit sparse, faunal evidence was interpreted by Eldridge and Robinson (1998: 44) to indicate a broad-spectrum pattern of resource acquisition associated with Early Nesikep and Lochnore Phase components. Based on the available lithic, faunal, and radiocarbon analyses, the primary activity at the site was interpreted a lithic maintenance area occupied by generalized foragers (Eldridge and Robinson 1998).

EdQx-43. Also known as the Baker site, EdQx-43 is situated on a broad alluvial river terrace overlooking the South Thompson River to the north (Figure 5). In 1991 and 1994, I.R. Wilson conducted a systematic excavation of the site to mitigate impacts associated with a highway development project. The excavation resulted in the identification of three occupational "zones" (Wilson 1991).

The excavation of Zone I produced modified flakes, complete and incomplete bifaces and unifaces, microblade cores, bipolar and multidirectional cores, leaf-shaped bifaces, bone awls, and an antler wedge (Wilson 1991). A leaf-shaped biface with an obliquely angled striking platform and no edge grinding was attributed to the Lehman Phase (Wilson 1991). Based on lithic and faunal data, this zone was interpreted as

representing a series of short-term, open-air occupations that may have occurred during the Middle and/or Late Periods (Wilson 1991).

Zone II is represented by lithic debitage, utilized flakes, complete and incomplete unifaces, and complete and incomplete biface fragments (Wilson 1991). Formed tools included: leaf-shaped bifaces with obliquely-angled striking platforms, obliquely-angled unifacial scrapers, a side-notched biface fragment with basal and lateral edge grinding, bone awls, an antler wedge, a longitudinally split rodent incisor and a keyhole limpet shell bead (Wilson 1991). Faunal remains identified were: mammal: bird, fish, reptile and freshwater mussel shell. (Wilson 1991). Wilson interpreted Zone II as a short-term use area that was possibly occupied during the spring during the Middle Period (Wilson 1991: 145–146). He proposed that some of the formed tools were typologically similar to those of diagnostic of Lochnore and Lehman Phase assemblages (Wilson 1991).

Zone III contained dense concentrations of lithic debitage associated with utilized flakes, complete and incomplete unifaces and bifaces, fragmented bipolar cores, a multidirectional core, antler wedges, an antler billet, animal teeth, shell beads, and freshwater mussel shell. Formed tools consisted of obliquely-angled scrapers (possible Lochnore Phase affiliation), circular and continuously retouched scrapers (possible Lehman Phase affiliation), leaf-shaped bifaces with no edge grinding (possible Lehman or Lochnore Phase), lanceolate bifaces with edge grinding (possible Lehman Phase affiliation), tear-drop bifaces, ground stone and abraders (Wilson 1991). Salmon remains dominated the faunal assemblage. The investigation suggested that Zone III was occupied during the fall and spring months throughout the Middle Period (Wilson 1991: 146).

EeRb-144. Located on an intermediate glaciolacustrine river terrace, EeRb-144 is situated on the north side of the South Thompson River (Figure 5). Large-scale excavation began in 1998 and incorporated systematic sampling for paleoethnobotanical remains. These efforts continued through 2002, at which time the site was partially destroyed by a major development project. A total of 203 m^2 were excavated at the site. The excavation resulted in the identification of Late and Middle Period archaeological deposits.

The Lehman Phase is characterized by thin, well-crafted v-shaped, corner-notched projectile points with heavy edge grinding, a lanceolate knife (with cortex present), and convex unifaces. The faunal assemblage consists of incised and perforated and bone splinter points (Nicholas and Tryon 1999).

The Lochnore Phase lithic assemblage is represented by leaf-shaped and lanceolate shaped, side-notched projectile points that exhibit heavy edge grinding. Several tear-shaped and circular formed unifaces with abrupt retouch were recovered. Biface preforms, notched cobbles, lithic debitage, microblades, unifacially retouched flakes, and utilized flakes were also noted (Nicholas and Tryon 1999). Red and yellow ochre was also associated with the Lochnore component. The faunal assemblage consisted of bone unipoints, bone awls, polished and perforated bone, and beaver incisor. Other remains included: freshwater mussel shell, deer, fish otoliths, anadromous salmon and other unidentified fish bones, *Olivella* and dentalium shells (Nicholas and Tryon 1999) (Table 10).

The entire site has been tentatively interpreted as a lithic maintenance and manufacture area (but not to the exclusion of other activities) that was revisited

throughout the Middle and Late Periods. This interpretation is based on lithic and faunal analysis and two radiocarbon dates: 5,100 and 6,140 BP (Appendix C).

EcRg-1B. The site was first identified in 1981 by Richard Brolly and later investigated by Arcas in 1985. EcRb-1B is situated on a lacustrine terrace feature that overlooks Quiltanton Lake to the west, in the Highland Valley east of Ashcroft, British Clumbia. This site is located in the sub-Boreal Pine Spruce biogeoclimatic zone, the only one of the 17 Middle Period sites that is not located in either a river valley or on a river terrace (Figure 5). Shovel tests resulted in the identification of a corner-notched biface fragment and debitage assigned to the Lochnore Phase. In addition to bifaces assigned to the Lehman Phase. Four radiocarbon dates ranging from 3,900 to 5,500 BP were derived from samples collected at the site (Appendix B) (Arcas 1986).

EeRf-1. This site is situated on a raised river terrace feature that overlooks Kamloops Lake and the outlet of the Thompson River to the west (Figure 5). In 1994, the western aspect of EeRf-1 was largely destroyed during a highway development project. A salvage excavation and data recovery program was initiated by Jean Bussey in the western portion where the site had been adversely impacted. In undisturbed portions of the site, systematic excavation resulted in the recovery of 80,000 pieces of lithic debitage, bifaces and biface fragments, preforms, notched cobbles, formed unifaces, microblades, utilized flakes, retouched flakes, one stone pestle fragment, and a stone bowl fragment (Bussey 1994). Multidirectional cores and microblade cores were also identified (Bussey 1994).

The Early Nesikep component is represented by thin, well-worked projectile points with v-shaped corner notching and convex basal margins (Bussey 1994). Deer, elk,

and freshwater mussel shell were also noted. The Lehman Phase at EeRf-1 is characterized by thin, obliquely-notched, pentagonal projectile points that are bi-convex in cross-section with basal thinning and heavy edge grinding, thick unifaces, unifacially retouched primary reduction flakes, and multidirectional cores (Bussey 1994). Deer, elk, beaver, and freshwater mussel shell were associated with Lehman Phase archaeological deposits (Table 10).

The Lochnore Phase archaeological assemblage at EeRf-1 is represented by thick, side-notched, bipointed bifaces that are lenticular in cross-section with edge grinding present, and by notched cobbles, foliate bifaces, microblades and microblade cores, and bone awls (Busssey 1994). Freshwater mussel shell and deer were present.

Five radiocarbon dates were derived from bone collagen samples collected during the excavation of EeRf-1. These range from 4,310 ± 60 BP to 5,670 ± 50 BP, and are associated with Middle Period archaeological assemblages located approximately 35–60 cm below datum (Appendix C). A small number of matrix samples were also collected during the excavation phase for floatation but these did not produce any paleoethnobotanical remains. EeRf-1 has been interpreted as a seasonal camp with activities centered on lithic tool maintenance and manufacture (Bussey 1994).

DISCUSSION: BEYOND DIAGNOSTICS AND RADIOCARBON DATES

In any study, or investigation of any cultural tradition or (post-contact) historical period, one question that must be asked is, "On what basis can this or that site be assigned to its archaeological descriptive unit?" This question has particular importance in this study because of the relatively small sample size of Middle Period sites identified

in the study area. Of the 31 archaeological sites in the Thompson drainage that have been assigned to the Middle Period, 17 (54%) have produced radiocarbon dates or diagnostic artifacts. The remaining 14 sites (Figure 6)—*almost half of the entire sample*, are considered possible or potential Middle Period sites (by at least some archaeologists) on the basis of the geological context and biophysical setting associated with each site locale (Figure 6). All of these sites were identified in the dry Interior Ponderosa Pine or Bunchgrass biogeoclimatic zones and all were situated in the river terrace environmental adjacent to the Thompson River.

The use of geological context and biophysical characteristics by contract archaeologists to determine Middle Period sites in the Mid-Thompson River region is relatively common and sensible. However, while employing geological context as the sole or primary criteria for assigning a middle Holocene age to the site is obviously not desirable in the absence of other evidence, it can at least alert the investigators to the possibility. Further investigation (including radiocarbon dating) of these potential Middle Period sites is clearly the only means to verify the degree to which geological and biophysical criteria can be relied upon to predict and determine Middle Period occupations. One or more of the following criteria was used by past researchers in making these attributions and deserve comment here.

Geological Context. The geological context in which archaeological materials are situated can influence archaeological discovery and interpretations (Raab and Goodyear 1984). The stratigraphic integrity of a site, for example, may be altered in deflationary environments resulting in spatial dislocation of materials from two or more occupations. In this case, sediments are transported and re-deposited through aeolian processes, thus

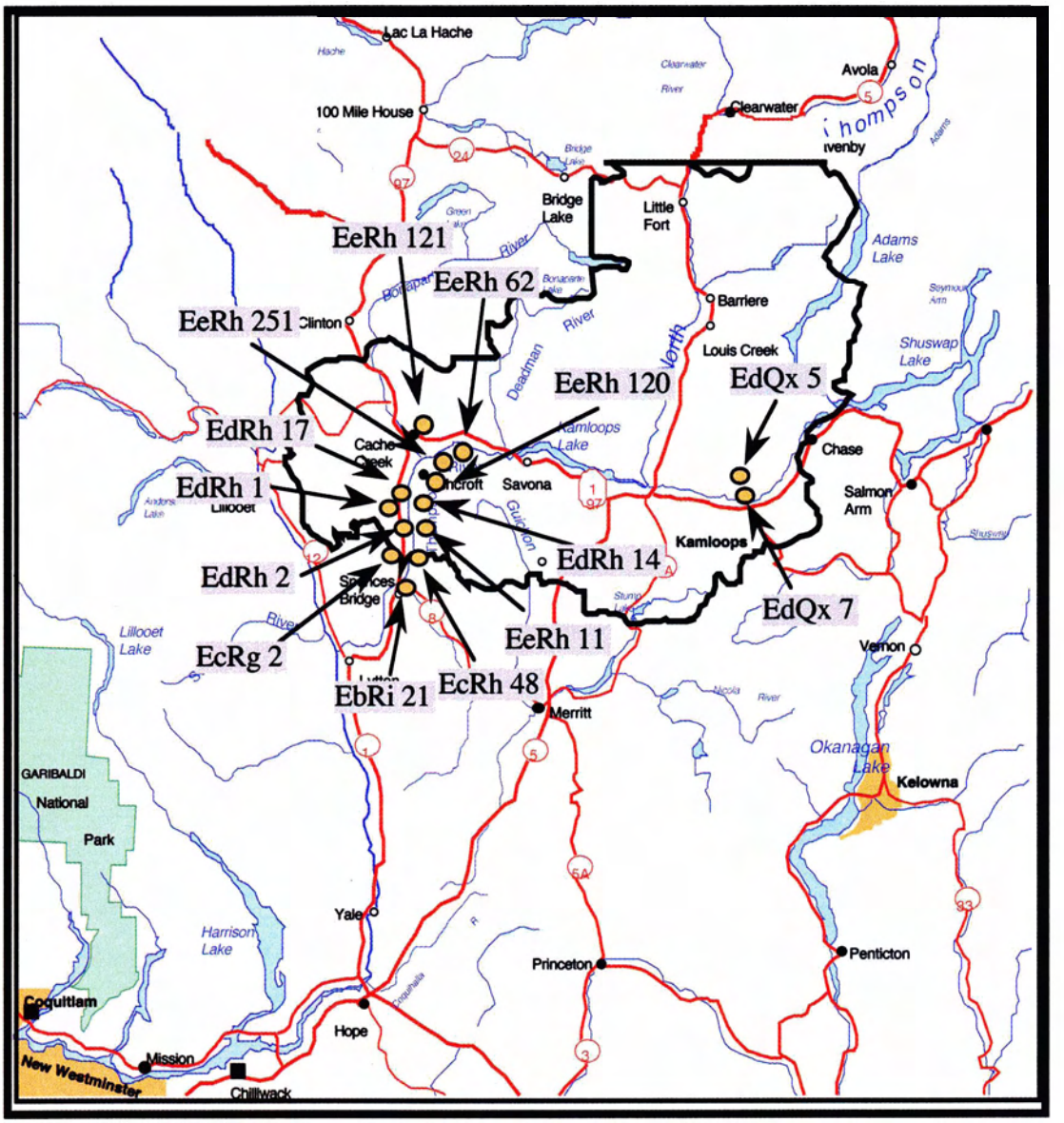

Figure 6. Mid-Thompson River region study area showing fourteen possible Middle Period sites based on geological and biophysical attributes (after NTS 1:2,000,000 BC Provincial Index Map).

affecting not only the original vertical distribution of archaeological materials but their usefulness as temporal markers (a point of contention at EdRa-14).

In the case of the 14 *possible* Middle Period sites that were identified in deeply buried sedimentary contexts, further analysis of the processes of deposition is needed. One reason is that a single flood event can deposit many meters of sediment, which may lead to skewed estimates of the age of deposits assuming that the site is discovered in the first place. In addition, the attributes of archaeological materials (e.g., artifact size) found in these deposits may demonstrate the effects of particular geological processes.

The detailed investigations conducted at EeRb-77, provide a caveat as to the tenuous nature of dealing with geological context in the absence of more detailed analysis. In 1998, an excavation unit placed at the very edge of the river bank at the southern margin of EeRb-77 revealed a deeply buried (ca. 1.5 m) hearth feature (Nicholas 1998). Radiocarbon dating of this feature resulted in a date of approximately 1,900 years BP. What is notable here is that elsewhere on this site a radiocarbon date derived from a sample buried by 2.5 m of sediment produced a date of approximately 6,500 years (Nicholas 1998). This information indicated that rapid deposition of fluvial sediments has occurred in this area of the South Thompson River within the space of the 500 m between these two test units, both on the river's edge. Without considering the nature of differential fluvial deposition, not only between different sections of the river valley, but within the same site, incorrect assumptions about age/depth correlations can easily occur.

Biophysical Settings. Another issue involved in determining where Middle Period sites may be located is related to biophysical setting, those hydrological and topographic features used by archaeologists to determine the likelihood of identifying an

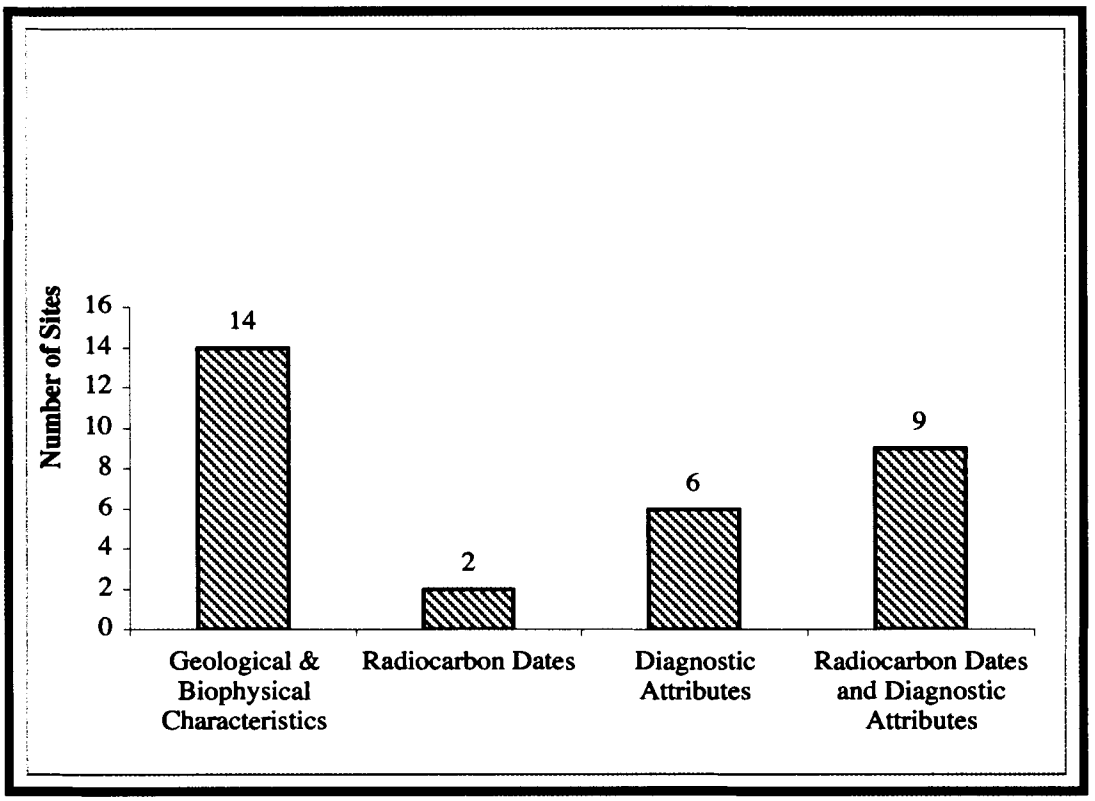

Figure 7. Relative frequency of criteria used to assign sites to the Middle Period (numbers at the top of columns refer to site count).

archaeological site. While this approach works well for locating sites, it is a less certain a means of determining site age. For example, while a 10,000-year-old site can only be found on a landform that age or older, sites of much more recent age can be found on 10,000-year-old landforms.

Environmental zones are also used by many consulting archaeologists to assist in determining where archaeological sites may be identified (e.g., Arcas Associates). The use of biophysical settings may lead to the identification of some archaeological sites but their value for detecting Middle Period sites is still unknown. This is perhaps because such a small sample of Middle Period sites have been identified in the study area that no patterning is yet discernible.

The most applicable use of biophysical setting when looking for Middle period sites is to determine where extinct or extant hydrological features are located. These features may have played an important role in past land use. Such is the case with EeRb-84, a site was identified on the crest of a ridge overlooking an ancient lake basin in the Scheidam Flats locality. EeRb-84 is one of the few Middle Period archaeological site that have been identified away from the Thompson River.

Interpretive Issues

In this chapter, I have summarized the basic characteristics and distribution of the 31 Middle Period archaeological sites that have been identified in the Mid-Thompson River region since the 1960s, (14 of which are only tentatively assigned to the Middle Period). This summary highlights some of the variations in the artifact assemblages and site locations. This reflects the nature of the sites themselves (e.g., single vs. multiple

Middle Period components and/or occupations), their location (largely riverine-focused) or the type of archaeology conducted (i.e., survey and testing versus detailed systematic excavation). There are, however, two other salient aspects of these sites bear further consideration here: (1) the potential for biases in research designs (e.g., the very limited use of floatation, researcher experience); and (2) the question of extra-regional influences (e.g., technological), I address each of these in turn.

Potential Biases in Research Designs. The most common site types associated with Middle Period hunter-gatherers are lithic tool maintenance, manufacture, kill and processing sites, and basecamps (e.g., EeRf-1, EdRi-11, EdRi-6). These sites have been classified as such by the investigators primarily on the basis of artifact assemblage composition and diagnostic tool attributes. For example, the archaeological assemblage identified at EdRi-11 and EdRi-6 consisted primarily of formed and unformed lithic artifacts and large ungulate bone (deer and elk). Based on this evidence, these sites were interpreted as representing elk and deer processing locations, a logical conclusion given what was recovered (Richards and Rousseau 1988: 50–57). Such interpretations have contributed to the inference that subsistence and mobility during the Middle Period were oriented to these resources, and may certainly have been the case. However, if flotation, recovery methods, sampling of hearth features, and the use of 3 mm (1/8-inch) mesh screen becomes routinely incorporated into project research designs, it is possible that evidence of a broader resource base or a wider range of activities will emerge. The degree to which sampling for small and highly fragmented remains are addressed may affect interpretations of Middle Period site-type and site behavior.

Variability and Extra-Regional Influences. Excavations at the Baker site (EdQx-43) have provided researchers with an opportunity to address the issue of cultural continuity between the Early Nesikep and Lochnore Phase. In 1992, Wilson hypothesized that both Lehman and Lochnore Phase archaeological components may represent a single culture group, rather than two distinct groups, because both Lehman and Lochnore components identified at the site were found in mixed contexts. He proposed that the differences between Lochnore and Lehman points were only stylistic and perhaps determined more so by function than culture—an argument reminiscent of the Mousterian debate of Bordes (1953) and Binford (1983b). Wilson's hypothesis has received attention from several researchers, notably Eldridge and Robinson (1998), Stryd and Rousseau (1996), and Prentiss and Kuijt (in press).

Archaeological data from the Baker site have also been used to argue that the Lochnore Phase (as represented at the Baker site) reflects the replacement of Nesikep peoples with Coast Salishan groups and the transition from highly to less mobile settlement and subsistence patterns. The primary data used by researchers to substantiate this claim is that they identified technological similarities in the leaf-shaped points identified at the Baker site with those found in coastal contexts (Richards and Rousseau 1987; Stryd and Rousseau 1996; Rousseau, in press). Alternatively, Prentiss and Kuijt (in press) use data from the Baker site to challenge Stryd and Rousseau's (1996) hypothesis outlined earlier. They indicate, as did Wilson et al. (1992), that cultural continuity exists between the Nesikep and Plateau Pithouse Traditions. They employ a method of lithic analysis developed by Hayden et al. (1996) to examine this issue (Prentiss and Kuijt, in press).

Excavations at EdQx-43 also resulted in the identification of the oldest known evidence of sedentism during winter months occurring in the Mid-Thompson River region during the Middle Period. Wilson (1992) proposed that the presence of pithouses, salmon fishing, lanceolate, and leaf-shaped bifaces, an absence of microblades, and evidence of trade with coastal peoples—all recovered from the undisturbed excavation of Zone III—may represent ties to the Columbia Plateau.

SITE DISTRIBUTION

This review of unpublished contract and academic reports from the Mid-Thompson River region identified 17 sites that have Middle Period components, and 14 others that CRM researchers assessed as having the potential to contain such deposits. Twenty-four of these 31 sites were discovered during CRM projects, the remainder through academic research. There is a great degree of variability in the type of investigations conducted at each of these sites. Some sites have been intensively investigated through excavation, others have only been subjected to ground surface inspection. This is due, in part, to differences in research designs and to the type of investigations that were conducted (CRM or academic) at each site. There is considerable variation the amount and types of data recovered from these sites.

The majority of CRM research projects conducted in the Mid-Thompson River region area are related to highway developments that are most often concentrated in low elevation areas, such as river valleys (e.g., EeRf-1, EdQx-41). If development in other environments occurs, it is likely that different site types will be identified, which may result in a richer understanding of the regions archaeological past. In the case of the

Middle Period archaeological record in the Mid-Thompson River region, there are so few known sites that revisiting current data and/or identifying new sites could have an enormous impact on what is known about Middle Period hunter-gatherers.

—CHAPTER 6 —

EXPLORING THE MIDDLE PERIOD CONCEPT IN FACT AND EXPECTATION

"Middle Plateau culture is an admittedly ill-defined cultural construct" (J.V. Wright 1995: 334).

When I first examined Canadian Plateau culture history, it became apparent that little attention had been placed on the analysis and interpretation of pre-pithouse archaeological sites. This prompted the investigation of reconstructions of subsistence, mobility, and land-use patterns that had been proposed for the Middle Period. This led me to explore the Middle Period within the parameters of the following four questions:

1. How have archaeologists defined and constructed the Middle Period concept?;

2. What factors have influenced and continue to influence archaeological reconstructions of the Middle Period in the Mid-Thompson River region?;

3. What new data have resulted from recent cultural resource management and academic research projects?; and

4. How do these data contribute to archaeological knowledge of the Middle Period for the greater Mid-Thompson River region?

To address these questions and a number of related issues, I embarked on a mission to critically examine the unpublished literature of contract and academic research projects that had been conducted in the Mid-Thompson River region. Such "new"

information, coupled with that available in published sources, could then be used to gain greater insight into how the Middle Period concept developed and how it has continued to evolve. Moreover, is our current understanding of the Middle Period as "ill-defined" today as Wright (1995) indicated over a decade ago?

After presenting the project goals and rational for this research in Chapter 2, I explored some of the general approaches used by researchers to achieve a greater understanding of hunter-gatherer subsistence, land use, and mobility. These important elements provided a framework that was applied to understanding how interpretations of Middle Period subsistence and settlement developed over time. This was followed by a review of the basic features that comprised the Middle Period concept.

In completing my review of the key themes of hunter-gatherer research, it became clear that the interpretation of both lifestyle and culture change were influenced in part, by paleoenvironmental reconstructions. In Chapter 3, I thus reviewed the modern environmental conditions and paleoenvironmental history of the greater Mid-Thompson River region. These data have provided researchers with important clues that have been, and continue to be, used to generate ideas about past environments conditions and the possible hunter-gatherer subsistence strategies and land-use patterns. Knowledge of modern environments is also important because the elements of the landscape that we observe today affect the outcome of archaeological survey. In addition, a review of the ethnoarchaeological reconstructions of past land-use patterns and subsistence strategies associated with specific environmental units was presented (Alexander 1992).

In chapter 4, I traced the historical development of Canadian Plateau culture history through a summary of the published texts (e.g., Fladmark 1986; Richards and

Rousseau 1987; Stryd and Rousseau 1996). Published culture-historical models were evaluated and the archaeological data from which they were based were presented. After completing the review of the published literature, it was evident that many of the archaeological sites used to define and reconstruct the Middle Period have been identified during CRM projects. This prompted me to review unpublished contract and academic reports. In Chapter 5, I presented the results of my review of 128 unpublished contract reports. This chapter included a summary of 17 Middle Period archaeological sites in addition to 14 that were determined by CRM archaeologists to possess the potential to represent Middle Period antiquity.

This chapter presents and discusses some of the key results that have emerged from this research.

RECONSTRUCTING/DECONSTRUCTING THE MIDDLE PERIOD

The lives of Canadian Plateau hunter-gatherers were originally perceived as relatively unvaried except for a few discernable transitions such as the change in settlement from pre-pithouse to the Plateau Pithouse Tradition (Sanger 1969). However, there is much to be learned from the examination of subsistence, mobility, and land use prior to the advent of pithouse life. For example, how did hunter-gatherers adapted to changing environmental conditions, such as the mid-Holocene warming, which must have affected resource availability and location?

The Middle Period is thus important in terms of major issues such as providing researchers with an opportunity to:

(1) track the development of cultural traditions, social organization, settlement,

and subsistence patterns on the Canadian Plateau region; and

(2) look at human responses to distinct changes (albeit it relatively gradual) in climate, environmental composition, and ecology.

A number of researchers, including Kuijt and Prentiss (in press), Lepofsky and Peacock (in press), and Rousseau (in press), are working on these topics.

Summary of Research Results

The unpublished reports reviewed in this study provided summaries of the artifact assemblages, site descriptions, and interpretations that were based on information, which was made available by CRM and academic researchers in unpublished reports. The results of this review of the Middle Period archaeological sites can be summarized by the following four elements:

(1) the lithic assemblages range from small to dense scatters that contain a range of formed and unformed tools;

(2) the Early Nesikep and Lehman Phase faunal assemblages are composed primarily of elk, deer, and freshwater mussel shell;

(3) the Lochnore Phase faunal assemblages consist of a mammal bone and fish remains;

(4) the identification of known sites commonly occurs on river terraces or river valleys: and

(5) the general trend among researchers has been to overlook the potential contribution of paleoethnobotanical sampling.

These results indicate that although an increase in archaeological research in the region has occurred over the past several decades, there are several issues that continue to characterize both, what we know of Middle Period hunter-gatherers of the Mid-Thompson River region and how we have come to know them. Each of these points is discussed in the section below.

Range of Lithic Assemblages. The Middle Period lithic components recovered at sites in the Mid-Thompson River region are comprised of a variety of formed and unformed tools (e.g., EdQx-43, EeRb-77). Bifaces commonly exhibited side or corner notching, although un-notched leaf-shaped forms were also frequently identified (see Chapter 5). Point bases included stemmed, concave, and convex forms. The cross-sections of points ranged from thin and well made to thick and poorly formed. Microblades and microblade cores are also well represented at many Middle Period sites in the study area (e.g., EeRb-140, EdRi-11). In addition, notched cobbles and multidirectional flake cores are present (e.g., EeRb-144, EeRf-1). Many Middle Period lithic assemblages from sites in the Mid-Mid-Thompson River region exhibit a high frequency of unformed tool types (e.g., retouched flakes, utilized flakes, microblades), which appeared to be related to the amount of lithic material recovered from these sites. In other words, at sites where large quantities of lithic debitage were present, so to was the amount of unformed tools. This may indicate that in Middle Period contexts where raw material is easily obtained, there is decreased effort placed on manufacturing formed tools.

The lithic assemblages often attributed by Canadian Plateau researchers (e.g., Stryd and Rousseau 1996) to the latter stages of the Middle Period contain thick, side-

notched, leaf-shaped points made from medium to poor quality raw materials. Similar points have also been found at coastal sites, which have been used to argue that cultural movements and technological diffusion to the Interior of British Columbia were established at this time. The presence of coastal shells, such as *Olivella* at several Middle Period sites in the region (e.g., EdQx-42, EeRb-144) has been used to support the notion of coastal–Interior trade networks. Alternatively, the thick point styles characteristic of the Lochnore Phase may represent functional demands rather than coastal influences or population replacement (Wilson 1991). These tools tend to be reliable because they are thick. However, they are likely not as easily maintained since resharpening is difficult due to overall thickness.

Bone and antler artifacts were also present at six of the Middle Period sites identified in my review of unpublished reports. These artifacts included: bone awls, perforators, needles, and points, as well as polished and perforated bone, and a single antler wedge. The presence of formed bone tools was much higher at Lochnore Phase sites, which may reflect technological shifts occurring at this time. Another possibility is that these items did not preserve at earlier sites.

Composition of Faunal Assemblage. The Middle Period faunal assemblage recovered at sites in the Mid-Thompson River region consisted of a wide range of resources that included elk, deer, salmon, reptile, turtle, bird, and freshwater mussel shell. Faunal remains were present at 12 of the sites presented (see Chapter 5). Elk, deer, and freshwater mussel shell were the most dominant species represented.

The use of bone and antler technology and the presence of ungulate remains in Middle Period faunal assemblages indicate that it is very likely that these faunal

resources were readily available from elk and deer populations. What is unlikely, however, is that these materials would preserve in moist or highly acidic sediment characteristic of forested areas. Thus, the recovery of faunal remains and bone and antler artifacts from sites that were located in the dry Interior Ponderosa-Pine and Bunchgrass biogeoclimatic zones reflects the better preservation conditions of these environments.

Site Setting. Of the Middle Period archaeological sites described in Chapter 5, only one site, EcRg-1B, was identified outside of the Ponderosa-Pine or Bunchgrass zones. The clustering of Middle Period sites within these two environmental zones may reflect hunter-gatherer land use and/or where archaeology is conducted duet o the demands of modern development. In other words, the majority of archaeological research that occurs in the Mid-Thompson River region area takes place within these biogeoclimatic zones. Highway and railway construction, for example, are concentrated in these relatively low elevation areas because that is where modern towns and cities tend to be located. Based on the fact that the majority of archaeological research undertaken in the area operates under the auspices of CRM, it is no coincidence that most of the known archaeological sites are identified in these areas. Archaeological survey in the region is also conducted for forestry development areas although, these investigations have not resulted in the identification of many sites that have been attributed to the Middle Period.

Both Stryd and Rousseau (1996) and Rousseau (in press) have proposed that a great deal of activity in the past would have been focused near major hydrological features, such as rivers. However, seasonal variation associated with spring "run-off" may have led to increased water turbidity, which could have prompted people to move to "fresh" water sources, notably upland lake or stream areas (Rousseau, in press).

Alternatively, it is also possible that when water turbidity was high, hunter-gatherers simply allowed their water to settle prior to consumption.

Lack of Paleoethnobotanical Sampling. The use of plant resources during the Middle Period is often speculated, but rarely demonstrated (e.g., Lepofsky, in press; Lepofsky and Peacock, in press; Richards and Rousseau 1987; Stryd and Rousseau 1996). Apart from the relatively obvious roasting pits and pithouse village sites Late Period, there has been virtually no systematic exploration for floral materials in the Canadian Plateau, with some exception (Lepofsky and Peacock, in press; Nicholas and Westfall, in press; Wollstonecroft 2000, 2002).

Upon examining the unpublished site data for the Mid-Thompson River region, it was apparent that large-scale, systematic paleoethnobotanical sampling undertaken at three Middle Period sites: EeRb-77, EeRb-140, and EeRb-144, whereas limited sampling by CRM archaeologists, had occurred at one other site, EeRf-1. The analysis of botanical remains from site EeRb-140 indicated a high incidence of berries (e.g., saskatoon, raspberry or thimbleberry) and seeds (e.g., pine, chenopod, choke cherry) as well as onion and other unidentified roots (Nicholas and Westfall, in press; Wollstonecroft 2000).

The archaeobotanical analysis of samples recovered at EeRb-77 and EeRb-144 is still underway. The results of the samples collected at EeRf-1 did not result in the identification of any archaeobotanical remains. Until further analysis is conducted at Middle Period sites in the region, the degree of reliance upon plant resources during the Middle Period will remain at the level of speculation.

DISCUSSION

Hunter-gatherers have often been defined by their mode of subsistence and how they situated themselves on their landscape. This is certainly true for the greater Mid-Thompson River region area, where questions about how hunter-gatherers utilized their landscape and available resources have been addressed by various researchers in past decades (e.g., Fladmark 1982, 1986; Nicholas and Tryon 1999; Richards and Rousseau 1987; Stryd and Rousseau 1996; Rousseau in press). In the discussion that follows, I focus on how we have come to know, what we do know about the Middle Period and how our knowledge of it has been influenced by various methodological factors and theoretical concepts.

I organize this discussion around four main themes: subsistence and settlement patterns (i.e., land use and mobility), tools of the trade (i.e., artifact typologies), culture history, and field methods and sampling. The goal of this discussion is to explore these key themes in relation to our current understanding of Middle Period hunter-gatherers.

Middle Period Subsistence: "Oh, Elk for Dinner...Again?"

How have we come to know the types of resources and subsistence strategies employed by Middle Period hunter-gatherers and what has influenced our understanding of this important aspect of life in the past? The diets of Middle Period hunter-gatherers have long been thought to center primarily on deer and elk (e.g., Lawhead and Stryd 1985; Richards 1978; Sanger 1970). This notion is based on recovered faunal remains, paleoenvironmental data, and other findings that have been influenced by the theoretical and methodological orientation of the research projects.

In the Thompson drainage, those Middle Period assemblages that have faunal remains (e.g., EdRi-6) are well represented by elk, deer, and freshwater mussel shells. Of the 17 sites described in Chapter 5, 41% (n=7) contained evidence of riverine exploitation in the form of freshwater mussel shell remains. It is probable that fish resources were also utilized at this time (e.g., Dalles, Oregon), but preservation biases and the failure to use smaller mesh (1/8") when screening matrices may also be responsible for their absence with early Middle Period archaeological assemblages (or, for that matter, any cultural period).

The contribution of plant resources to hunter-gatherer diets is perhaps the most overlooked aspect of Middle Period subsistence. Based on paleoenvironmental data available for the Mid-Thompson River region, it is apparent that such plant species as fresh greens, balsamroot (*Balsamorhiza sagittata*), and various berries were available to hunter-gatherers during the Middle Period (Lepofsky and Peacock, in press). Why then have these important resources been overlooked and not incorporated into projects at the level of research design?

The lack of attention placed on the importance of plant foods by many researchers during the study of Middle Period hunter-gatherers can be correlated with theoretical perceptions of hunter-gatherer lifeways. If hunter-gatherer subsistence is assumed to be oriented to hunting large game, than other aspects of past diet will be overlooked. Another issue is that archaeobotanical sampling is expensive and demands a certain level of experience from researchers, specifically at the analysis stage. There are also issues with practicality, as matrix samples can be very cumbersome. These factors have impacted how archaeological research is conducted in British Columbia and, in turn,

reconstructions of hunter-gatherer lifeways. This is especially true regarding our understanding of archaeobotanical remains. For example, of the 17 sites examined in this study, only four sites were subjected to sampling for botanical remains. Of these four, one contained evidence of plant remains that possibly date to the Middle Period, the results from two sites are not yet available, and one (EeRf-1) did not contain any archaeobotanical remains. If more sites were tested for archaeobotanical remains, the possibility of recovering archaeobotanical evidence would increase, as would our current knowledge of the range of resources exploited during the Middle Period. This knowledge may lead to a richer understanding of hunter-gatherer land use, mobility, technology, dietary patterns, and gender roles.

Middle Period Settlement: Issues of Mobility and Land Use

Mobility is one of the most distinguishing characteristics of hunter-gatherers (Kelly 1995: 111). Understanding the relationship between people and their landscape is important when attempts are made to reconstruct hunter-gatherer behavior during the Middle Period. Both Kuijt (1989) and Rousseau (in press) propose that a transition away from highly mobile lifeways occurred during the Middle Period (e.g., Kuijt 1989; Rousseau, in press).

In the Mid-Thompson River region, Middle Period hunter-gatherer mobility has been interpreted by analyzing site size, site frequency, and site location (e.g., Rousseau and Richards 1985; Richards and Rousseau 1987). Hunter-gatherers who are *highly mobile* focus on a limited range of widely distributed and unpredictable resources—a pattern of land use that may result in linear, non-repetitive, and nearly invisible land-use

patterns (e.g., Nicholas 1987: 105). Rousseau (in press) indicates that Early Nesikep and Lehman Phase archaeological sites are often small, deeply buried, and frequently associated with lithic scatters, freshwater mussel shell, and bone (Table 7). These sites are widely distributed over the landscape in areas adjacent to both major rivers and extinct hydrological channels and are also found at mid-elevations (Rousseau, in press). The small size of these sites are characteristic of highly mobile hunter-gatherers (Rousseau, in press).

It has been proposed that climate conditions during the first half of the Middle Period (ca. 7,000–5,000 BP), led to grasslands that dominated the landscape (Hebda 1995). Such an environment favored grazing animals such as elk, which themselves are highly mobile. These remains are represented at five (of the 17 sites), which date to first half of the Middle Period (e.g., EeRf-1, EdRi-6). Because of this, it has been proposed by several researchers that these animals were relied upon for subsistence and that exploiting this resources would have demanded a higher degree of mobility than that associated with riverine resources exploitation (e.g., Richards and Rousseau 1987; Rousseau 1991; Stryd and Rousseau 1996). In addition, the absence of pithouse dwellings during the early stages of the Middle Period has been attributed notions of to greater mobility associated with hunter-gatherers at that time.

A transition from highly mobile to *less mobile* hunter-gatherer lifeways has been proposed for the latter part of the Middle Period (beginning ca. 5,000 BP) (e.g., Kuijt 1989; Kuijt and Prentiss, in press Rousseau, in press). Evidence for this transition is derived from both paleoenvironmental reconstructions and archaeological data. The archaeological sites associated with the later part of the Middle Period (i.e., Lochnore

Phase) are characteristically larger and more visible on the modern landscape than earlier sites (e.g., Baker site, EeRb-144). The larger site size has been interpreted as a both a reflection of changing environmental conditions that resulted in a higher degree of resource concentration especially in river valleys and an increased reliance upon stored foods.

For decades, Canadian Plateau researchers have concentrated their efforts on interpreting change identified in the archaeological record aimed at understanding the development of the pithouse tradition. These changes are often correlated with the shift from highly mobile activities centered on hunting ungulates to less mobile activities such as fishing and preparing food for storage (e.g., drying salmon, gathering plants) (Hayden et al. 1985; Kuijt 1989; Richards and Rousseau 1987; Stryd and Rousseau 1996). Of course, other variables contributed to the decrease in mobility that is represented by larger sites located adjacent to river systems. For example, cooler temperatures may have prompted hunter-gatherers to situate themselves at lower elevations during cold months.

Based on our current understanding past environmental conditions, it is likely that a higher degree of mobility occurred during the initial half of the Middle Period than the latter. However, paleoenvironmental reconstructions are limited in detail as they span several thousands of years. For example, researchers indicate that the climate from approximately 8,500 to 4,500 BP was slightly warmer and dryer than today and dominated by dry grassland environments (Hebda 1995). The time frame spans 4,000 years—almost the entire Middle Period. This begs the following question: to what degree can current environmental reconstructions be relied upon to decipher change in hunter-gatherer subsistence and mobility? And, in turn, what is the utility of Alexander's land-

use model, based on what is essentially the modern landscape, for understanding the Middle Period, specifically prior to 4,500 years BP.

The general paucity of data from Middle Period sites restricts our ability to reconstruct hunter-gatherer lifeways. To date, we cannot adequately explore the issue of mobility satisfactorily. Perhaps new types of questions pertaining to change in hunter-gatherer lifeways that do not center on mobility or subsistence should be proposed. Sampling that incorporates methods aimed at identifying small and highly fragmented remains must also be initiated. In addition, an examination of how interpretations and perceptions of hunter-gatherer social organization change over time as related to broader trends operating beyond the academic sphere could provide insight into a greater understanding hunter-gatherers.

Middle Period Tools of the Trade

In archaeological assemblages recovered at sites in the Mid-Thompson River region, a wide range of lithic artifacts has been assigned to the Middle Period. Several distinguishing attributes have been identified and used to determine the temporal and cultural affiliation of archaeological components. However, site interpretations that rely heavily upon diagnostic artifacts to the exclusion of other data may skew our understanding of the Middle Period archaeological record. The data from this thesis provide an example.

For example, of the Middle Period archaeological sites presented in this study, 15 radiocarbon dates were derived from sites containing diagnostic bifaces assigned to a unique archaeological unit (i.e., Lehman Phase). Based on the presence of diagnostic

bifaces/points, these sites were assigned to the Middle Period by the initial researchers. That is, if a site contained a point type with Lehman-like attributes the site was then assigned to the Lehman Phase. If a radiocarbon date was also available, researchers compared the degree that date correlated with range of dates proposed for Middle Period sites in the greater Mid-Thompson River region.

To examine how effective diagnostics are as temporal makers, these dates and biface styles were compared (Figure 8). Only one single component site (EdQx-41) identified in this study contained a diagnostic biface type correlated with a Middle Period radiocarbon date; all other sites had more than one diagnostic biface style present (see Table 9). Figure 8 shows that the Lochnore Phase diagnostic biface was associated with dates that ranged from ca. 5,500–4,400 BP, which lies within close range of Lochnore dates (ca. 5,000–3,800 BP) and within the dates proposed by Stryd and Rousseau (1996) for the Lehman Phase. Lochnore *and* Lehman diagnostic bifaces recovered in mixed contexts were associated with dates that ranged from ca. 4,450 to 4,250 BP, but according to the current culture-historical model (Stryd and Rousseau 1996), such dates are attributed only to the Lochnore Phase (ca. 5,000–3,800 BP). It must be noted that very hot, dry conditions characteristic of the Middle Period climate may have result in the mixing of components (Rousseau, pers. comm. 2004).

The Lochnore, Lehman, and Early Nesikep diagnostic bifaces identified within mixed contexts were associated with dates ranging from ca. 5,750–4,200 BP, which spans

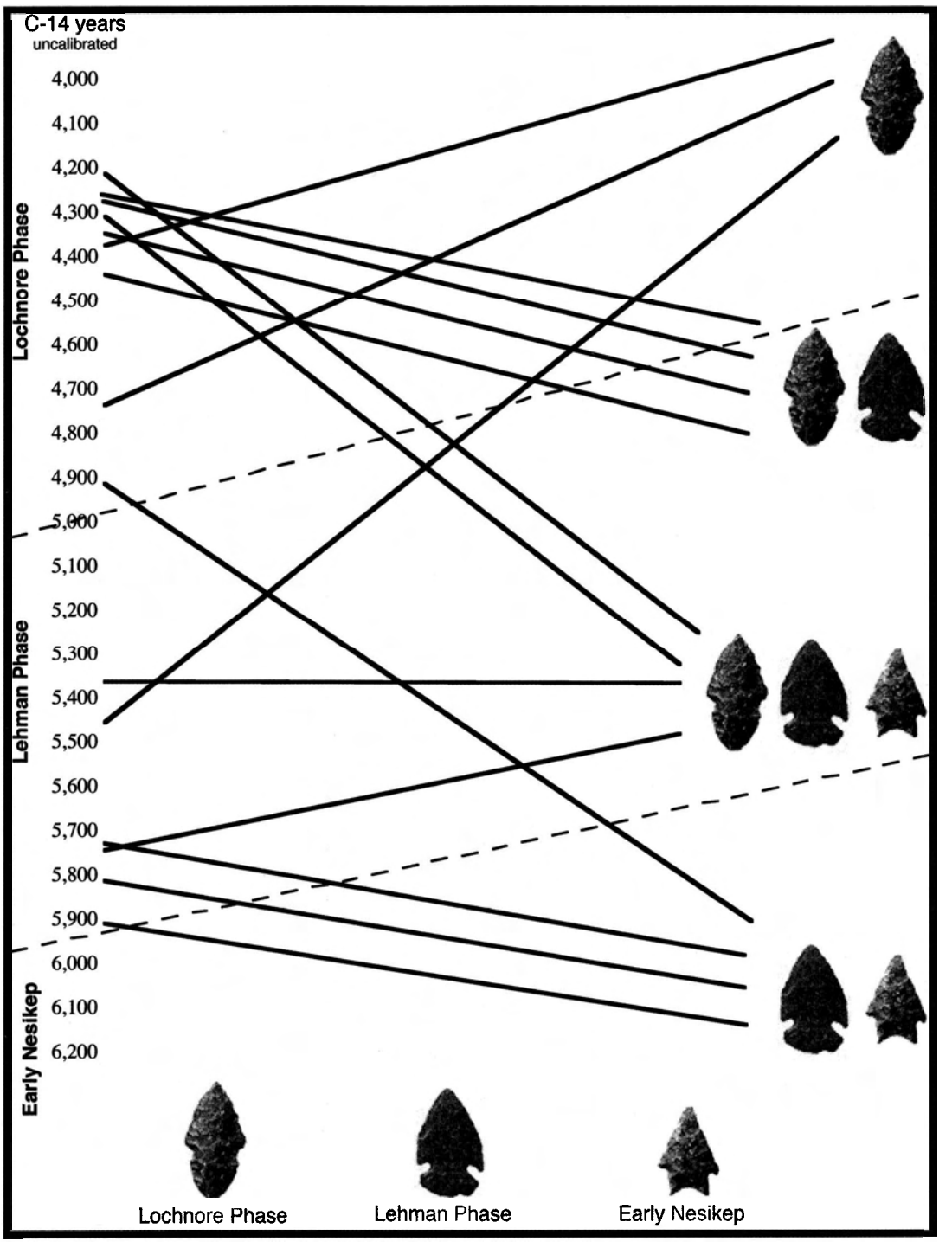

Figure 8. Middle Period Diagnostic Bifaces Compared to C14 Age (see Tables 8, 9, and 10) from Sites in the Mid-Thompson River region.

the time frame proposed by Stryd and Rousseau for the both the Lochnore and Lehman Phases (ca. 6,000–3,500 BP). The Lehman and Early Nesikep diagnostic points recovered mixed contexts were associated with dates that range from ca. 5,900–4,900 BP and thus correlates with dates proposed by Stryd and Rousseau for the Lehman Phase (ca. 6,000–5,000 BP).

It is thus apparent that Middle Period diagnostic points and radiocarbon dates from sites in the Mid-Thompson River region do not always correlate temporally and/orculturally with the current culture-historical model proposed for the region. It is true that there are problems inherent in using formally defined diagnostic bifaces to distinguish cultural affiliation and site age. This can lead to difficulties when attempting to correlate point styles and dates because it is impossible to distinguish which of these points are associated with the dates. In the case of the Early Nesikep and Lehman Phase sites that contained diagnostic points and radiocarbon dates, the lack of correlation shows that it is not possible to determine temporal affiliation of each specific point style from the Middle Period sites presented in this study. The use of diagnostic points to assess temporal and cultural affiliation in the Mid-Thompson River region should continue to be investigated and tested. In addition, increased effort to locate and analyze single component Middle Period sites may assist in determining the usefulness of diagnostics as accurate time and cultural markers

Middle Period Culture History

The tripartite temporal framework that classifies past behavior and material culture into early, middle, and late periods represents arbitrary categories that facilitate

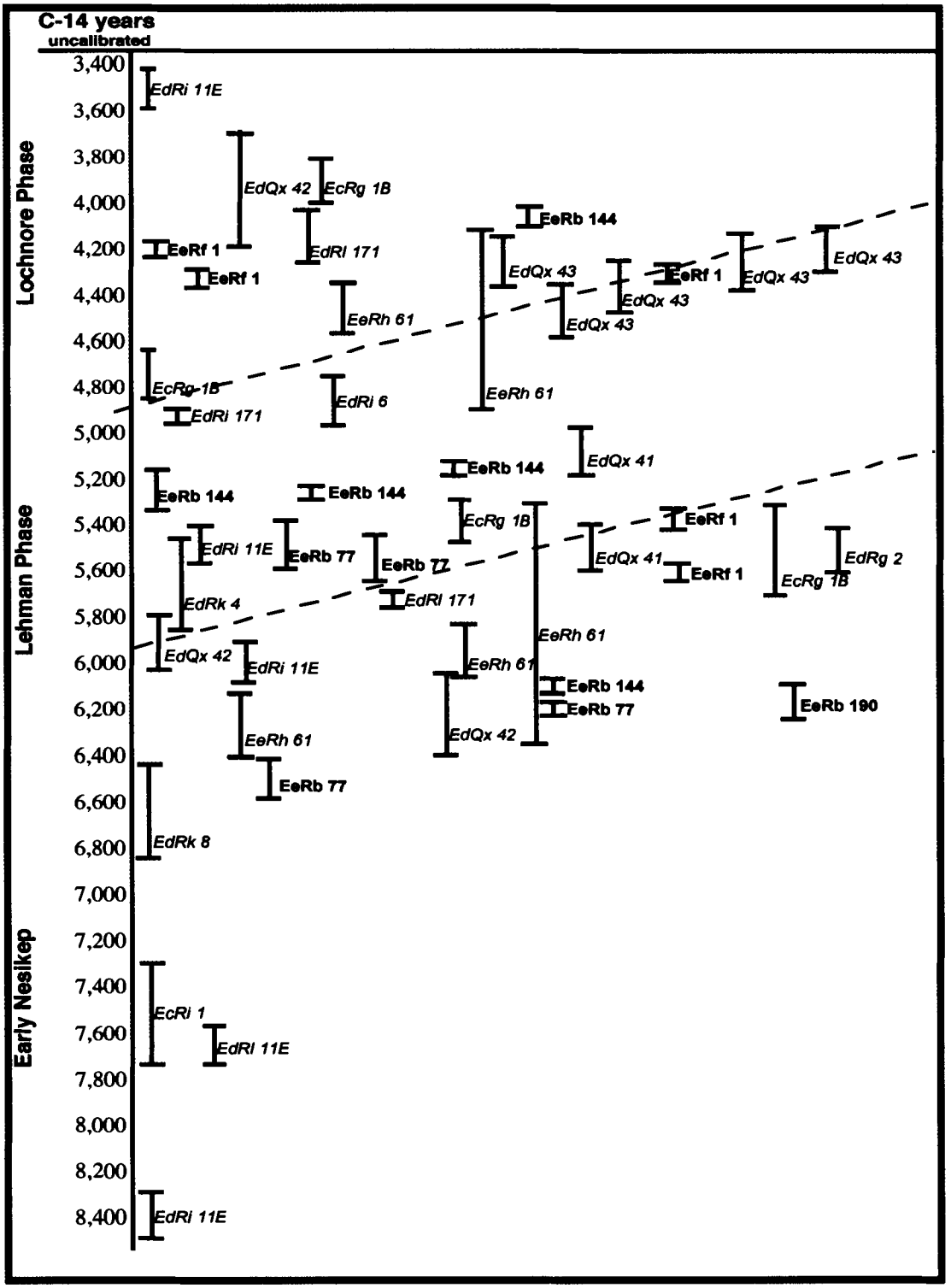

Figure 9. Middle Period Radiocarbon Dates (cited to one standard deviation) from Archaeological Sites in the Mid-Thompson River region as Compared to Stryd and Rousseau's (1996) Culture-Historical Model (recent radiocarbon dates are italicized).

organization and explanation. The culture-historical method has been applied extensively to describing the Middle Period archaeological record for the Mid-Thompson River region. Uncalibrated radiocarbon dates that were available from Middle Period sites located in the Mid-Thompson River region area that include recent dates (showing in bold) were plotted in relation to Stryd and Rousseau's (1996) and Rousseau (in press) current culture- published culture-historical model.

These dates provide a tool to determine if radiocarbon dates from recently excavated sites fall within the time frames proposed for the three archaeological units (Early Nesikep, Lehman, and Lochnore Phase) (Rousseau, in press). The result was that the distribution of the dates fall within the time frame proposed for the Middle Period. However, it is apparent that many more dates correlate with the Lehman and Lochnore Phase than with Early Nesikep occupations (Figure 9). This indicates that our current understanding of the Early Nesikep is limited to interpretations of artifact assemblages and site distribution patterns. An increase in the number of dated Early Nesikep components could have a great impact on what is know about the early occupants of the region, which could also lead to revisions of the regions culture history.

A common assumption associated with culture-historical models is that they incorporate and represent the entire body of known archaeological data. In some cases, this is an accurate assessment. However, often these models reflect assumptions about the past that may not represent the range of archaeological data available. This may be due, in part, to the fact that once culture histories are published, the documents and data from which they are based may be "old news" and would thus not reflect data recovered within the pre-publication timeframe. One possible solution to this would be an ongoing and

accessible synthesis of archaeological site data derived from CRM and academic projects that could be easily incorporated into ongoing research projects–perhaps in the form of an online GIS database.

Methods and Sampling Issues

A number of "highly visible" archaeological pithouse village sites are located in British Columbia's Mid-Thompson River region. These sites tend to be easily accessible and are often a dominant feature on the modern landscape. Abundant information has thus been recovered from housepit sites over the past 50 years. However valuable, this information is limited in its usefulness as it provides little insight into the lifeways associated with pre 4,500 year old sites. Unlike pithouse village occupations in the Mid-Thompson River region, evidence of earlier occupations left by mobile peoples tends to be a less apparent on the modern landscape, which makes them more difficult to identify. Often, Middle Period archaeological sites identified in the Mid-Thompson River region are fortuitously located through the use of survey and sampling strategies that are aimed at locating occupations associated with more recent (e.g., pithouse) archaeological contexts (Nicholas 1983: 1–6). Research designs that are oriented toward sampling for archaeological materials that are less visible (i.e., more ephemeral sites) on the modern landscape may certainly assist in the identification of Middle Period sites.

Assessing field methods in terms of their adequacy in identifying early sites is of critical importance to the future of Middle Period hunter-gatherer research. Of the Middle Period sites identified in this thesis, almost half (n=8) contained both Middle and Late Period components. Only one site, EeRb-144, exhibited a high degree of stratigraphic

integrity, which was based on the absence of mixing (Nicholas and Tryon 1999). The remaining seven site contexts were identified as being highly disturbed, which has led to difficulties in distinguishing specific archaeological components and occupations (e.g., EeRf-1, EdQx-43, EeRb-140).

To date, only two single component Lochnore sites and one Lehman Phase site have been identified in the Mid-Thompson River region—none of which have been subjected to systematic excavation. This is due, in part, to the fact that the objective of the majority of the archaeology in the region is CRM-based, where the primary objective is to mitigate the negative impacts to archaeological sites by development projects, rather than the thorough investigation and systematic extraction a wide range of archaeological data. If intensive investigation was undertaken at these sites, it is possible that other components would be identified—and the number of single component sites would decrease. Systematically excavated, single component sites, located in the Mid-Thompson River region area have the potential to explain some of the variation in subsistence, land use, technology, and mobility that must have occurred during the Middle Period.

FUTURE DIRECTIONS

The Mid-Thompson River region provides archaeologists with an opportunity to investigate a range of hunter-gatherer lifeways—from the highly mobile hunter-gatherers of the early postglacial times through to the large pithouse village sites characteristic of the Late Period. There are three important avenues that must be explored if interpretations of Middle Period hunter-gatherer subsistence, land use, and mobility are to

become increasingly representative of the range of behaviors that must have occurred in the past. These are: (1) access to data; (2) identification of single component sites; and (3) assessing the adequacy of field methods. Each of these points is briefly discussed below.

The previous chapters have traced the development of Canadian Plateau archaeology, specifically that of the Middle Period in the Mid-Thompson River region. Published culture-historical models have been presented and recent approaches to interpreting the archaeological history of the region have been examined. Several factors have and continue to influence archaeological reconstructions of the past: (1) archaeologists do not operate in a vacuum, but are influenced by their social, political, economic, intellectual environment, (2) archaeological research and its outcomes are politically and socially constituted, and (3) the theoretical orientation of research projects (in essence how archaeologists view the past) guide research methods that, in turn, influence reconstructions of the past.

As more research is conducted in the Mid-Thompson River region and as new questions are asked, the way we have come to know the Middle Period will inevitably change, as it has several times over the past four decades. Middle Period culture history was first proposed based on excavations in one locality (Lochnore-Nesikep Creek) and today incorporates site data from the entire mid-Fraser Thompson River region. This has resulted in a continually evolving understanding of hunter-gatherer subsistence, settlement, and technology. This thesis has highlighted the contributions made by CRM and academic archaeologists to hunter-gatherer research in the Mid-Thompson River region area. Middle Period archaeological research provides a unique opportunity for archaeologists to investigate how change in subsistence and mobility are manifested in

the archaeological record. The broader implication of these studies is that these findings may serve to increase the degree of representativeness associated with interpretations of hunter-gatherer lifeways.

To date, CRM continues to be the dominant form of archaeological research conducted in British Columbia. The efforts of these projects have resulted in the identification of 80% of the known Middle Period sites in the greater Mid-Thompson River region area. Some of these sites have been rigorously investigated (e.g., EdQx-43) while others have not (e.g., EeRb-84). Nevertheless, the data recovered from these sites are more often presented in unpublished reports that are currently held at the Archaeology Branch. Ongoing synthesis of unpublished archaeological data may prompt researchers to incorporate these findings when conducting analysis.

CRM archaeologists have presented many of the reconstructions of Canadian Plateau lifeways (e.g., Richards and Rousseau 1987; Stryd and Rousseau 1996). In many ways, the future of the Middle Period lies in the hands of the CRM archaeologists and their efforts to identify sites of this age and to publish their research findings..

CONCLUDING REMARKS

This thesis has traced the historical development of the Middle Period concept as presented by researchers in both published and unpublished texts. The primary objective of this research was not only to provide a synthesis of the Middle Period archaeology in the Canadian Plateau but to explore the factors that have contributed to the construction of culture-history and interpretations of Middle Period hunter-gatherer subsistence, settlement, and technology. To achieve this, I identified several key factors that have

influenced our understanding of the Middle Period archaeological record and how culture-historical models have developed over time.

The broader trends that frame general hunter-gatherer studies were presented in relation to their influence upon the development of the Middle Period concept. Perhaps the most influential methodological tool that affected Canadian Plateau archaeology was the development of the culture-historical model first proposed by Willey and Philips in 1958. This tripartite scheme continues to be used in the region today and provides a frame of reference for describing data recovered from archaeological sites throughout the region (e.g., Rousseau, in press). The interpretations of Middle Period hunter-gatherer subsistence, mobility, and land use have been most influenced by optimization models based on extracting terrestrial mammal resources. However, some archaeologists are focusing their attention on addressing aspects of, for example, ancient plant use and are examining archaeobotanical remains from Canadian Plateau sites (e.g., Wollstonecroft 2000). These efforts may result in a richer understanding of Middle Period hunter-gatherer mobility and land use.

The research presented in this thesis included a summary of 17 Middle period archaeological sites within the Mid-Thompson River region resulting from research undertaken by CRM and academic archaeologists. Sixteen of these sites were located in the river valley and river terrace environmental zones situated in either the Ponderosa Pine or Bunchgrass biogeoclimatic zones. A wide range of archaeological data have been recovered from these sites, which may correlate with the range of field methods and the theoretical orientation of researchers conducting investigations in the Mid-Thompson River region. For example, the systematic excavations conducted by Nicholas near

Kamloops on the intermediate river terraces that line the South Thompson River indicate that these Middle Period site areas were also occupied during the Late Period (EeRb-140, EeRb-144). The identification and detailed investigation of Middle Period sites in areas away from the Thompson River valley will increase our understanding of regional land-use patterns. This is a critical component to achieve a greater understanding of Middle Period hunter-gatherer lifeways.

The broader implication of Middle Period hunter-gatherer research is that these findings may serve to increase the degree of representativeness associated with interpretations and perception of hunter-gatherer lifeways. In the Mid-Thompson River region, this task is in the hands of contract and academic archaeologists. Perceptions of hunter-gatherers have influenced archaeological research in the region—from the notion of the "big game" hunters, to the riverine reliant fishing villagers, to more recent ideas about the plant gatherers of the Plateau. Perhaps the greatest challenge will be to incorporate each of these perceptions into our overall interpretation of Middle Period hunter-gatherers.

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APPENDIX A: MIDDLE PERIOD RADIOCARBON DATES FROM THE ENTIRE MID-FRASER-THOMPSON RIVER REGION

Borden Number	Component/ Provenience	C–14*	Calibrated date	Laboratory	Material	Source
EcRi–1	Early Nesikep	7530 ± 270	8541 (8423) 8039	GSC–530	charcoal	Sanger 1967
EdQx–42	Early Nesikep, & Lehman (Zone I)	5920 ± 130	6889 (6782, 6874, 6852) 6635	AECV–1319c	carbonate*	Wilson 1991
	Lochnore (Zone II, III)	6290 ± 100	7289 (7187) 7159	AECV–1319c	carbonate*	Wilson 1991
	Lochnore (Zone III)	3950 ± 260	4832 (4417) 3993	AECV–1616c	charcoal	Wilson1992
EdRi–11E	Early Nesikep (stratum VI)	8400 ± 90	N/A	SFU–867	bone	Rousseau 1991
	Early Nesikep (stratum V)	7670 ± 80	8541 (8423) 8383	SFU–866	bone	Rousseau 1991
	Early Nesikep (stratum II)	6000 ± 80	6988 (6882, 6874, 6852) 6742	SFU–886	bone	Rousseau 1991
	Lochnore (stratum II)	5480 ± 70	6469 (6297) 6197	Beta 37977	bone	Rousseau 1991
	Lochnore (stratum II)	3520 ± 70	4832 (4417) 3993	AECV–1616c	bone	Rousseau1991
EdRk–4	Early Nesikep & Lochnore (Zone VII)	5635 ± 190	6669 (6418) 6289	GX–408	bone	Sanger 1970

Borden Number	Component/ Provenience	C–14*	Calibrated date	Laboratory	Material	Source
EdRk–8	Early Nesikep & Lehman (Zone II)	6650 ± 110	7589 (7496) 7429	I–2367	bone	Sanger 1970
EeRh–61	Early Nesikep (Zone IV)	5870 ± 500	7274 96728) 6189	SFU–384	bone	Arcas 1985
	Lehman (Zone IIB)	6290 ± 120	7299 (7187) 7093	SFU 398	carbonate*	Arcas 1985
	Lehman (Zone IIB)	4470 ± 110	5299 (5212, 5195 5051) 4875	Riddle–572	bone	Arcas 1986
	Lehman (Zone III)	5940 ± 120	6942 (6841,6836, 6790) 6669	SFU–397	carbonate*	Arcas 1985
	Lehman (Zone III)	4470 ± 400	5639 (5212, 5195 5051) 4875	SFU–386	charcoal	Arcas 1985
EdRi–6	Lehman (pit feature)	4850 ± 100	5726 (5594) 5470	Beta–11453	bone	Rousseau 1988
EcRg–1B	Lehman (Component II)	5390 ± 90	6297 (6192) 5997	Beta–14482	bone	Arcas 1986
	Lochnore (Component II)	5490 ± 190	6469 (6299) 5997	Riddle–249	bone	Arcas 1985
	Lochnore (Component II)	4750 ± 190	5724 (5560, 5531, 5472) 5289	Riddle–250	bone	Arcas 1985 Arcas 1986
EcRg–1B	Lochnore (Component II)	3930 ± 100	4526 (4412) 4249	Beta–133352	bone	Arcas 1986
EdRg–2	Lochnore (Component III)	5510 ± 90	6410 (6304) 6203	Beta–14483	bone	Arcas 1986
EdQx–41	Lochnore (Zone II)	5480 ± 100	6406 (6297) 6189	AECV–1317c	carbonate	Wilson 1991
	Lochnore (Zone III)	5100 ± 110 5775) 5729	5981 (5906, 5787	AECV–1316c	bone	Wilson 1991

Borden Number	Component/ Provenience	C–14*	Calibrated date	Laboratory	Material	Source
EdQx–43	Lochnore (Zone III)	4450 ± 100	5289 (5045, 5002, 4997) 4872	AECV–1566c	charcoal	Wilson 1992
	Lochnore (Zone III)	4350 ± 90	5043 (4962, 4956, 4873) 4851	AECV–1561c	charcoal	Wilson 1992
	Lochnore (Zone III)	4260 ± 90	4962 (4852) 4652	AECV–1564c	charcoal	Wilson 1992
	Lochnore (Zone III)	4240 ± 120	4967 (4841) 4575	AECV–1562c	charcoal	Wilson 1992
EdQx–43	Lochnore (Zone III)	4200 ± 90	4863 (4829, 4747, 4731) 4571	AECV–1563c	charcoal	Wilson 1992
EdRl–171	Lochnore (Component II)	4145 ± 205	4962 (4815, 4758, 4720, 4673, 4647, 4621, 4618) 4419	I–9724	charcoal	Stryd 1980
EdRa–14	Mixed Early Nesikep & Lochnore					
	(30–60cm BD)	5750 ± 60	6520	BETA–114557	bone	Robinson 1997
	(30–50cm BD)	4940 ± 50	5655	BETA–114556	charcoal	Robinson 1997

* dates calibrated by Stryd and Rousseau (1996) using Stuiver and Reimer (1987) cited at one sigma.
** all bone dates are from bone collagen

APPENDIX B: DATA EXTRACTION FORM

Project Date(s) _____ Archaeology Branch Permit #:_____

Researcher(s): _____

Project Type: _____

Associated Ministry: _____

Nearest Town or City: _____

First Nation's Involvement: YES / NO

Report Title: _____

Research Objectives:

_____

_____

_____

Methodology:

_____

_____

_____

_____

_____

Environmental unit and biogeoclimatic zone::

Landform and associated landscape (e.g., wetlands):

Site description and setting:

Type of field investigations undertaken (e.g., AIA):

Artifacts recovered:

Field investigation results:

Lithics:

Faunal:

Floral:

Other:

Site/Component Interpretation (including dating techniques):

Map References

Management Recommendations (e.g., significance):

Cited Publications:

Notes:

APPENDIX C: RECENT MIDDLE PERIOD RADIOCARBON DATES FROM THE MID-THOMPSON RIVER REGION AREA

Borden Number	Component/ Provenience	C–14*	Calibrated date	Laboratory	Material	Source
EeRb–77	Lochnore & Lehman					
	(250cm BD)	5590 ± 100		BETA 77134	charcoal	Nicholas 1991
	(255–260cm BD)	6560 ± 90		TO 10671	charcoal	Nicholas 2002
	(285–290cm BD)	6210 ± 60		TO 10670	charcoal	Nicholas 2002
EeRb–144	Mixed Early Nesikep, Lehman & Lochnore					
	(30–40cm BD)	6140 ± 50		BETA 149800	carbonate	Nicholas 2001
	(20–30cm BD)	5250 ± 50		BETA 116172	unknown	Nicholas 1998
	(60–70cm BD)	5170 ± 60		BETA 116173	bone	Nicholas 1998
	(35–40cm BD)	4080 ± 80		BETA 149802	charcoal	Nicholas 2001
EeRb–190	Early Nesikep					
	(50–55cm BD)	6180 ± 80		BETA 90606	carbonate	Nicholas 1996
EeRf–1	Early Nesikep					
	(55–60cm BD)	5670 ± 60		CAMS 18478	bone	Bussey 1994
	(35–40cm BD)	5390 ± 60		CAMS 18477	bone	
	Lehman					
	45–50cm BD)	4310 ± 60		CAMS 18476	bone	
	(105–110cm BD)	4310 ± 60		CAMS 18479	bone	
	Lochnore					
	(35–40cm BD)	4220 ± 70		CAMS 18475	bone	

• C14 dates as presented by original researchers in unpublished contract and academic reports (C13 unavailable).