An Overview and Assessment of Archeological Resources, Denali National Park and Preserve, Alaska
Cover Photograph: Teklanika West after excavation of eroded area at the edge of the bluff. Flags mark burned soil (West 1965:6, Plate 1 #10).
AN OVERVIEW AND ASSESSMENT OF ARCHEOLOGICAL RESOURCES, DENALI NATIONAL PARK AND PRESERVE, ALASKA

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ABSTRACT

This Overview and Assessment describes and assesses the known archeological resources within Denali National Park and Preserve. Recommendations are also provided, based on the assessment and on needs identified by the park and regional cultural resources staff.

Background information necessary for interpreting DENA's 187 cultural sites is provided in the Cultural Environment and Physical Environment sections. The Cultural Environment section also includes a thorough and unique compilation of ethnographic information prepared by Dianne Gudgel-Holmes. Other sections provide a thorough review of all previous archeological research conducted within the park (including a discussion of relevant research in adjacent areas), and a discussion of known sites from the prehistoric, ethnographic and historic periods.

For reference purposes, the four appendices present specific resource information: Appendix A, a series of table summarizing previous research (Tables 3, 4, and 5); Appendix B, an annotated list of known sites in DENA; Appendix C, a compilation of ethnographic data prepared by Dianne Gudgel-Holmes; and Appendix D, photographs of the original (West 1965) Teklanika artifact assemblage.
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INTRODUCTION

Mt. McKinley National Park, located in the north central Alaska Range in the heart of Alaska’s interior (Figure 1), was established in 1917 to preserve the wilderness habitat of the large mammals that inhabit the region and to foster public access and appreciation of the area (Kauffman 1954). The 1980 Alaska National Interest Lands Conservation Act (ANILCA) redesignated the park as Denali National Park and Preserve (hereafter DENA or the park) and expanded its boundaries to encompass a total of six million acres, divided into three contiguous management units; Denali Wilderness (the original Mt. McKinley National Park), Denali National Park, and Denali National Preserve (Figure 2). Denali is internationally well known for the rugged beauty of its natural features, especially Mt. McKinley, the North American continent’s highest mountain.

Cultural resources, however, have not been considered DENA’s focal point. In fact, for many years the significance of the largely unknown prehistory of the park was underestimated, overshadowed by decidedly spectacular natural resources. Recent research, conducted within DENA and in adjacent areas, has shown that the central Alaska Range played an important role in the early occupation of Interior Alaska. It is a region with a rich history of use by native groups, miners, trappers and homesteaders from the prehistoric period into historic times.

Project Description, Objectives and Limitations

The need for information concerning cultural resources on federal lands has increased dramatically over the past decade, because of the rapid emergence of a system of protective legislation. Managers facing new preservation responsibilities turned to archeologists for information that would enable them to comply with agency mandated management programs and address the impacts of specific projects. Managers particularly require information that enables them to:

Effectively program the future course of land use within the study unit with respect to known and potential cultural resources.

Relate better the anticipated and scheduled short-range and long-term projects in the study unit to the management of archeological, historical, and other cultural resources.

Integrate more easily other resource management programs with those developed for cultural resources [McGimsey and Davis 1977:66].
Figure 2. Denali National Park and Preserve.
Such information rarely can be obtained from small, independently conducted projects, which often have limited and specific objectives. This seems particularly true for the vast, culturally and environmentally diverse park units in Alaska where even the largest archeological surveys may only be able to sample a fraction of total acreage. Thus the manager can benefit from information that accurately and concisely summarizes the entire body of cultural resource data and, most importantly, provides the necessary background for interpreting the significance of those resources. The need for this type of context has been identified in the General Management Plan for Denali for many years.

As outlined in NPS-28, the Cultural Resources Guideline for the National Park Service (USDI/NPS 1985), archeological Overview and Assessments describe and assess the known and potential archeological resources in an area. The overview reviews and summarizes the database, the assessment evaluates it, and the completed document enables the manager to plan future studies and actions. This Overview and Assessment is specifically intended to meet those objectives for the archeological resources in Denali National Park and Preserve.

Much of the work that goes into completing an Overview and Assessment resembles "housekeeping". All forms of research generate records, most of which are never published. To name a few, archeological projects generate field notes, site forms, site report forms, photographs and photograph logs, artifact collections, curation records, and finally, reports. In most cases, these materials are not easily accessible to the manager or researcher. Even when readily available, trying to extract information from these varied sources can be a time consuming if not impossible task. The Overview and Assessment provides a central source that summarizes the results of previous research and can direct researchers to other relevant materials when needed. On this level it is a catalog of what has been done and what is now available. The bulk of this information is presented in the extensive site summary tables (Appendix A) and annotated site list (Appendix B).

Another, equally important value of an Overview and Assessment lies in its ability to point out what information is lacking and suggest ways to resolve management problems. Attempting to synthesize the information and recommendations generated by previous researchers highlights major and minor problems such as sources of redundancy and omissions in the resource base. Among the problems identified for Denali National Park and Preserve are incomplete survey coverage, the lack of an historical archeological research program, non-systematic management of archeological records, and a general lack of detailed knowledge of recorded sites. These problems have been addressed in Assessment and Recommendations sections of the Overview and Assessment, with the hope that they will be useful in improving the existing archeological database and stimulating planned research in the future. In all sections, the overview has attempted to minimize the use of technical jargon. A Glossary has been included to provide definitions of important technical terms and concepts.
While Overview and Assessments are often completed as a contributing phase of a major field investigation, such as an archeological inventory or some other type of identification study, this project has not involved new field work. This Overview and Assessment will provide a comprehensive synthesis and assessment of existing archeological site data for DENA and make recommendations that will be useful in planning future research and assessing the significance of known and potential archeological sites.

An archeological site is defined as the locus of any surviving physical evidence of past human activity, including the record of the effect of the activity on the environment. It is important to note that this definition does not specify that the "past human activity" must have occurred during the prehistoric era. It recognizes that the physical elements of both historic and prehistoric sites contribute to the archeological record and that it is necessary to consider historic and prehistoric archeological resources in order to obtain a complete picture of the archeological resources of DENA. But it has not been possible to give equal consideration to both the historic and prehistoric archeological sites in DENA. Archeologists and historians have traditionally sought very different types of information from sites. One result is a marked lack of archeological documentation for historic sites. With this limitation in mind, the Overview and Assessment presents the best information available for the documented prehistoric and historic archeological sites in the park. The need for an historical archeological research program will be discussed in greater detail in the Assessment section.

While the Overview and Assessment does discuss selected historic resources, it does not take the place of the nearly completed Denali Historic Resource Study (Brown 1990). Although the overview and assessment and the Historic Resource Study appear to overlap in their coverage of DENA's historic sites, the content of the two documents is significantly different. The Historic Resource Study will include a more comprehensive and detailed discussion of DENA's history and will discuss historic resources from the vantage point of traditional forms of historic documentation (mainly the written and archival record) as well as historic resources documented as archeological sites.
PHYSICAL ENVIRONMENT

Geographic Setting

The vast area encompassed by Denali National Park and Preserve is clearly highlighted by Mt. McKinley, at 20,306 feet the nation's highest, and many feel most impressive, peak. But not all of the park is rugged and mountainous. The park is roughly bisected on the diagonal, with a southern half comprised of McKinley, its glaciers, rivers and surrounding lesser peaks, and a northern half characterized by tundra-carpeted lowlands, hills, and flat glacial valleys drained by glacier-fed rivers, lakes and streams (Figure 3).

The mountainous regions of the park are part of the Alaska Range, a northern continuation of the Pacific Mountain System that parallels the Pacific coasts of the continental United States and Canada (Wahrhaftig 1965). This system extends across southern Alaska in a wide arc, with Mt. McKinley near the approximate apex of the arc. In the vicinity of Mt. McKinley, the Alaska Range forms a series of rugged, parallel, glaciated ridges with an irregular longitudinal profile. These ridges rise from 6,000 to 9,000 feet in elevation and are interspersed with much higher peaks, such as Mt. McKinley and Mt. Foraker. The peaks are perennially snow and ice-clad above 7,000 feet on the north side and above 6,000 feet on the south side.

The more massive, active glaciers include the Kahiltna, Ruth, Eldridge, Tokositna, Yentna and Lacuna along the south side and the Muldrow along the north side. The largest of these range between 30 and 45 miles long. Streams are braided and of glacial origin. Major drainages in the northern half of the park include the McKinley, Kantishna, Toklat, Teklanika, Sanctuary and Savage Rivers, all of which drain to the north. The Nenana River, which marks a section of the eastern park boundary, also drains to the north. The Yentna, Kahiltna, Tokositna and Chulitna Rivers all drain to the south of Mt. McKinley.

North of Mt. McKinley lie the foothills of the Alaska Range, characterized by more gentle ridges, 2,000 to 4,000 feet in altitude, separated by rolling lowlands. The foothills are incised by several north-flowing streams, which form steep canyons across the ridges and broader, flat valleys in the lowlands. The area is largely unglaciated, but some valleys were shaped by glacial activity during the Pleistocene.

The lowland areas of the park that extend beyond the Alaska Range are part of a broad depression known as the Tanana-Kuskokwim Lowland and named for the two major drainages that occur there (Wahrhaftig 1965:29). This region was formed by outwash deposits of the glaciers and rivers that originate in the Alaska Range.
Plate 1. South Side of Mt. McKinley.
Figure 3. Relief Map of Denali National Park and Preserve.
In some places, the deposits are marked by moraine topography. Some portions of the lowland contain extensive sand dune and loess deposits (Wahrhaftig 1965).

The Modern Environment

Climate, Flora and Fauna

Climate has remained essentially constant since the early Holocene (the most recent geologic epoch, roughly spanning the past 10,000 years). Continued climatic warming, the final retreat of Pleistocene glaciers, and rising sea levels are all important climatic events associated with the Holocene. The warmer temperatures had a dramatic effect on the landscape and its inhabitants. Expanding boreal forest replaced cold, dry Pleistocene grasslands and human populations were challenged to adjust:

From 14,000 to 8,000 years ago, Alaska's warmer climate underwent a few cooler fluctuations, but clearly heralded the steady warmth of the modern period. Glaciers continued to melt during this time and the sea rose to near modern levels. Peoples of the Interior saw unfavorable changes in vegetation and animal resources after 10,000 years ago, as boggy ground developed, large game herds lost ground (literally, for Beringia was now submerged) and solitary game animals accompanied the advance of forest into the Interior [Aigner 1986:121].

Today, the north and south regions of the park are influenced by different climatic systems. Areas north of the Alaska Range lie within a continental climatic zone and experience less precipitation and greater fluctuations in temperature than the southern regions, which are characterized as having a transitional maritime-continental climate. This dichotomy is partially generated by the Alaska Range itself, which blocks air mass movements and precipitation from the southern maritime systems (Pévé 1975:4-5). Within the park annual temperatures have ranged from 90 degrees Fahrenheit in the summer to -52 degrees Fahrenheit in the winter. Mean maximum temperatures at the eastern edge of the park are 12.8 degrees in January and 65.9 degrees in July. Mean minimum temperatures are -5.2 degrees in January and 43.8 degrees in July (DENA Wilderness EIS nd:39, DENA Mining EA nd:22).

In keeping with the wide range of topography that occurs in the park, the modern vegetation pattern is also quite varied. The boreal forest, or taiga (both terms used here in the general sense to describe the subarctic forests of the north temperate zone), is a very broad classification applied to the mixture of spruce trees, deciduous trees and woody brush common to northern regions. This biome adopts very different local characteristics depending on such local factors as elevation, drainage, soil development,
slope, aspect, etc.

Within the park, these variations in vegetation can be divided into five major vegetation associations, listed here in order of ascending elevation (NPS DENA Wilderness EIS nd:40) More specific vegetation descriptions can be obtained from Viereck et al. (1986):

**Low Brush-Bog:** Generally occurs in low and/or poorly drained areas, such as river drainages and around lakes. Commonly associated with stunted black spruce. Common in the Lake Minchumina area, where it occurs around old river terraces, outwash plains and sloughs. Where drainage conditions permit, low brush-bog zones may be interspersed with other vegetation associations, such as bottomland spruce-poplar forest.

**Bottomland Spruce Poplar Forest:** Occurs in better-drained lowland areas. Characterized mainly by white spruce and Alaskan paper birch, with an understory of balsam poplar, willow and alder. Ground cover includes mosses, horsetails and flowering plants.

**Upland Spruce-Hardwood Forest:** This association occupies moderate elevations, up to the tree line (approximately 2,000 feet within the park; ranges up to 3,000 feet in protected valleys). Characteristic species include white and black spruce, paper birch, balsam poplar, quaking aspen, larch and willow. Other species found in association with the upland spruce-hardwood forest include the little tree willow, feltleaf willow, resin birch, American green alder, thinleaf alder, Alaska rose, bush cinquefoil, red currant, berry shrubs, such as blueberry, cranberry, and lingonberry (or lowbush or mountain cranberry), mosses and lichens.

The upland spruce-hardwood forest is widespread within the park, with local environmental conditions determining which individual species become dominant: quaking aspen with white spruce on well-drained uplands, dense white spruce along river banks, balsam poplar along gravelly riverbottoms, stunted black spruce in poorly drained areas or on north-facing slopes.

**Moist Tundra:** The moist tundra association occurs above the tree line, often on benches and slopes. It is comprised of dwarf shrub plants, primarily dwarf birch and willow. Other species include blueberry, labrador tea, bearberry, alpine azalea, and crowberry. Grasses and sedges occur in wetter areas.

**Alpine Tundra:** Alpine tundra is a plant cover of dwarf shrubs that occurs above the tree line but below the snow line. These areas commonly have
thin, rocky soil and/or exposed patches of bare rock and gravel. Depending on local conditions, the tundra may take quite different forms, including mat and cushion tundra or tussocks. Characteristic species include mountain avens, bearberry, crowberry, ground willows, alpine azalea, and lingonberry (lowbush or mountain cranberry).

Mt. McKinley National Park was originally conceived to protect the diverse and abundant game animals that inhabit the region. Caribou, moose, brown bear (grizzly bear), black bear, Dall sheep, and wolf are the most visible large mammal species. Small mammals include beaver, red fox, hoary marmot, coyote, collared pika, arctic ground squirrel, red squirrel, snowshoe hare, lynx, otter, porcupine, marten, wolverine, weasel, lemming, vole, and assorted mice (NPS DENA Wilderness EIS nd:41).

Many species of fish and birds also inhabit the park. King, Chum and Coho salmon runs once occurred on both sides of the Alaska Range, in tributaries of the Susitna, Kuskokwim and Tanana rivers. Today, runs are sparse when compared to some other regions of Alaska, occurring in the gravelly streams that originate in the Kantishna Hills and flow into larger tributaries, such as the Bearpaw river and Moose Creek. Other species of fish include arctic char, Dolly Varden, lake trout, broad whitefish, humpback whitefish, round whitefish, northern pike, sheefish, and arctic grayling (USDI nd:42).

A wide variety of birds inhabit the park seasonally, during migration. One study identified more than 130 species within the boundaries of the original Mt. McKinley National Park (USDI 1981:33). Commonly occurring species include varieties of ptarmigan, chickadee, raven, magpie, woodpecker, owls, and trumpeter swans (USDI 1981:33). The role that these diverse resources played in the traditional native subsistence economy will be discussed in the Ethnographic Overview section and in Appendix C.

Paleoenvironment

Glacial Chronology

Alaska has experienced a long and extensive glacial history, beginning in the late Miocene and continuing through today. It is with the more recent of these glaciations, those of the later Pleistocene (the Illinoian and Wisconsinan glaciations) and Holocene, that archeologists are generally concerned. Glaciations of Pleistocene and Holocene age occurred throughout the Interior. Both involved complex cycles of advancing and retreating ice masses that modified the surrounding environment. The movement of glaciers across the landscape produced broad, U-shaped valleys and other distinctive topographic features, such as steep hillsides, ridges, cirques, and spires. Melt water and
disintegrating ice also altered the landscape, downcutting valleys and depositing sand and gravel (drift) in broad outwash plains and intricate moraines that are marked with characteristic microrelief features such as eskers, drumlins, moraine ridges, kettles, and kames.

The Illinoian glaciation was the third of four Pleistocene glaciations. The resulting moraines exhibit more gentle, weathered topography than those of more recent glaciations, with broad, smoothly rounded ridges and few primary microrelief features (Pévé 1975:19).

The Wisconsinan glaciation was the fourth and final Pleistocene glaciation, occurring between 70,000 and 10,000 years ago (Pévé 1975: Table 2 and 3). As compared to Illinoian glacial features, the "fresher", more sharply defined Wisconsinan glacial features are "...so well preserved that the glaciated character of the terrain is immediately obvious to the most casual observer" (Pévé 1975:25). In many areas, evidence of Illinoian advances has been obscured by Wisconsinan age glacial activity. Along the north slopes of the Alaska Range, for example, terminal moraines attributed to Illinoian advances lie only short distances beyond those of Wisconsinan age (Pévé 1975:18).

Glacial activity continued into the Holocene in some parts of Alaska, with two and possibly three cycles recorded in some regions. An early cycle occurred between 8,500 BP and 6,000 BP. More recent activity occurred from 4,000 BP and very recent times, although this latter episode may reflect two distinct cycles separated by a deglacial interval from 1,500 to 2,000 years ago (Pévé 1975:32).

Research in the Nenana Valley area (Ten Brink 1983; Thorson and Hamilton 1977) has defined a series of local glacial episodes, listed here from oldest to youngest: a poorly-known pre-Browne Glaciation (pre-Wisconsinan), the Browne Glaciation (pre-Wisconsinan or Early Wisconsinan), the Healy Glaciation (Early Wisconsinan), and the Riley Creek Glaciation (Late Wisconsinan) (Powers et al. 1983:42). Continuing research has identified four distinct periods of glacial activity during the Riley Creek Glaciation; the Riley Creek I advance (17,000 to 25,000 years ago), the Riley Creek II (Yanert Fork) advance (13,500 to 15,000 years ago), the Riley Creek III (Carlo) advance (11,800 to 12,800 years ago), and the Riley Creek IV (Siksik Lake or post-Carlo) advance (9,500 and 10,500 years ago) (Powers et al. 1983:43; Powers and Hoffecker 1989:267; Ten Brink 1984).

An identifiable series of outwash plains and terraces remain for all but the earliest of these glaciations. The Dry Creek terraces are the highest and the Riley Creek terraces, located just below the Healy terraces, are the lowest. The Riley Creek Glaciation occurred during the Late Pleistocene, the time period that correlates with the earliest known human occupation of the area.
In many areas, the gravel outwash substrate of the Healy terrace is capped by deep deposits of windblown silt derived from glacially eroded rock. These deposits, known as loess, are common in central and western Alaska, especially along rivers draining glaciers. In some areas loess deposits are more than 60 meters thick. They provide an excellent medium for archeological and paleontological preservation, as occurred at the nearby Dry Creek archeological site, which occupies the Healy terrace.

Climate, Flora and Fauna

Paleontological, geological and archeological research at Dry Creek and other sites in the Nenana Valley have revealed that during much of the Pleistocene, the environment of the North Alaska Range was dramatically different than it is today. Temperatures were cooler, there was more wind, less precipitation and woody plants were relatively uncommon. Much of the Interior remained ice-free and vast areas supported a dry, treeless grassland, termed the "mammoth steppe" after the extinct wooly mammoth that once roamed the region (Powers et al. 1983; Powers and Hoffecker 1989; Ten Brink 1984).

The mammoths and other grazing species, including varieties of horse, bison, saiga antelope, sheep, moose, elk, caribou, and musk-ox, were well adapted to the mammoth steppe environment and flourished. But at the close of the Wisconsinan glacial period, between 13,500 and 11,000 years ago, the grasslands in the North Alaska Range began to be replaced by woody shrub plants (mesic shrub tundra), such as shrub birch, willow, blueberry and cranberry. By the early Holocene, around 10,000 years ago, the climate had become warmer and moister. Shrub tundra became increasingly prevalent and trees, first poplar and then spruce and alder, appeared and spread rapidly. This trend continued until spruce forests and forest-tundra had extended throughout the Alaska Range by 3,500 BP (Ager 1984; Ten Brink 1984). Animal species were also undergoing changes. As occurred in most other glaciated regions, mammoth, like many large Pleistocene mammals, underwent gradual dwarfing, apparently an adaptive response to the changing postglacial environment. Other species, such as sheep, were able to adapt and have persisted into modern times.
CULTURAL ENVIRONMENT

Prehistoric Overview

Culture History

Most researchers who have addressed the peopling of the New World agree that the first inhabitants of the North American continent came from Siberia after migrating across the broad, low-lying land mass or land bridge we have come to know as Beringia (Dikov 1988; Greenberg et al. 1986; Hopkins 1967, 1979; West 1981). The term land bridge, however, can be misleading, implying a narrow, restricted doorway between two lands. Beringia was a viable environment in its own right, extending well beyond the now-submerged Bering land platform to include wide expanses of Siberia and Alaska and the extreme western portion of the Canadian Yukon as well. The entire area extended over 2,000 kilometers north to south and a similar distance east to west (West 1981).

The climate and landscape of the world’s arctic regions were dominated by massive glaciers some 20,000 to 14,000 years ago. Sufficient water was withdrawn from arctic seas and transformed into ice that sea levels throughout the northern hemisphere lowered. As sea levels dropped the floors of the Chukchi and Bering Seas were exposed forming the continuous land mass that we know as Beringia (Hopkins 1967, 1979).

Several terms have been used to describe the landscape of Early Pleistocene Beringia. These include tundra-steppe (Ager 1975; Giterman and Golubeva 1967, Hibbert 1982), arctic steppe (Matthews 1982), and the previously noted mammoth steppe. Fossil pollen studies portray a generally treeless vegetation dominated by grasses, sedges, heaths, and various species of Artemisia (Alaska wormwood). Dwarf birch and shrub willow were also represented, but were less common (Hopkins 1979).

Approximately 14,000 years ago, the climate began to warm and the glaciers began to retreat. Subsequently rising sea levels flooded the coastal shelves, accelerating the breakup of the ice caps and glaciers that had effectively blocked human expansion into eastern Beringia and North America. As late glacial times drew to a close 10,000 years ago, the climate of Beringia became essentially like the modern climate of the region (Hopkins 1979).

Sometime before rising sea levels breached the Bering Land Bridge, northeast Asian hunters of large terrestrial mammals slowly but steadily expanded into Beringia. Evidence for this migration lies in similarities between prehistoric cultures in Siberia and Alaska, including a variety of biological characteristics and certain specific aspects of tool technology, especially the manufacture and use of microblades. Although
virtually all researchers agree that the New World was populated by Siberian groups migrating across Beringia, there is still considerable difference of opinion about the number and timing of migrations.

There is general agreement that the Aleut and Eskimo peoples are closely related. Comparisons of linguistic and physical characteristics suggest that the Aleut and Eskimo peoples diverged from a single, fairly late migration that crossed the southern margin of the Bering Land Bridge, eventually spreading along the coastal margins after reaching Alaska. Dates suggest this divergence may have occurred as early as 9,000 to 10,000 years Before Present (BP) (Laughlin et al. 1979) or as late as 3,000 BP (Dumond 1987).

The prehistoric cultures of the Interior are less easily explained, however. Two major hypotheses have been offered, basically differing in whether there was one or two additional migrations. The first point of view recognizes the presence of only one other ancestral population in the New World. These people are thought to have migrated in conjunction with the Eskimo-Aleuts and expanded from Beringia into Interior Alaska, where they eventually developed into the Athabaskan peoples and subsequently all other Native American cultures known today. This population is thought to have been adapted to a non-coastal lifeway quite different from that of the Eskimo-Aleut ancestral population (Laughlin et al. 1979).

Other researchers suggest that, in addition to the Eskimo-Aleut migration, there were two earlier, separate migrations across Beringia into the Alaskan Interior. The very earliest migration, perhaps dating to 20,000 BP, is thought to have been made by people who inhabited the Interior and eventually expanded southward into the continental United States becoming the ancestors of all other Native American cultures (D. Clark 1981). Little archeological and physical evidence exists for these cultures, termed "Amerinds" or Paleoindians. A later migration, better represented in the archeological record, is thought to have developed into the known Athabaskan cultures (Greenberg et al. 1986).

The basis for either lumping or splitting these earliest inhabitants of the Interior is linguistic and biological (dental and genetic) evidence that characterizes Northern Athabaskans and other Native Americans. While the multiple migration theory may eventually be born out, many scholars remain unconvinced that there is sufficient linguistic, dental and genetic evidence to separate the Northern Athabaskans from all other Native Americans (Greenberg et al. 1986:488-497).

Whatever the ethnic identities of its earliest inhabitants, Alaska's Interior provides considerable evidence of prehistoric occupation. This evidence is reflected by the region's key prehistoric archeological sites, many of which are discussed below.
Regional Prehistoric Chronology

Several researchers have noted that the archeology of Interior Alaska is not well known (Bacon 1986; Dixon 1985). This stems from a variety of factors, some related to locating prehistoric cultural material and others related to interpreting it. As stated by Dixon:

Unique physical factors in central interior Alaska pose difficult problems for archeological research. The region is characterized, with few exceptions, by poor stratigraphy and a lack of deeply buried, naturally stratified archeological sites. Vast areas of lower topographic relief contain massive deposits of perennially frozen flood plain alluvium, while areas of higher topography are usually mantled by shallow deposits of undifferentiated loess (rarely exceeding 50 cm in thickness) in which as much as 12,000 years of prehistory may be recorded. Such locales are frequently subject to cryoturbation and lack of organic preservation, thus rendering dating difficult and frequently impossible [1985:47].

In spite of these limitations archeologists have proposed and continue to refine basic cultural sequences for the region. The first sequences were extracted from a few well known sites with datable stratigraphy and diagnostic artifacts and features. In these instances, different artifact assemblages, as viewed in a multicomponent site, could be compared and contrasted to others in the region.

The basic chronological framework for Interior Alaska consists of three very broadly defined cultural traditions: The Paleoarctic tradition, The Northern Archaic tradition and the Athabaskan tradition (Figure 4). Evidence for earlier occupations also will be discussed.

As it is used here, the term tradition refers to a way of classifying groups of people in space and time based on similarities in tool types and styles. A more technical definition is a grouping based on artifact styles that is less inclusive than the term culture (Willey and Phillips 1958).

Pre-Paleoarctic Occupations  (30,000 to 11,500 BP)

Some researchers feel that the earliest recorded artifacts in North America have been found along the Old Crow River in the Canadian Yukon. At Old Crow, the apparently worked bones of Pleistocene animals have been recovered, including a caribou tibia flesher provisionally radiocarbon dated to 27,000 BP (Irving and Harington 1973:335-340; Morlan and Cinq-Mars 1982:353). Most researchers now dispute the proposed age of the flesher however, arguing that it was manufactured much more recently, from fossilized bone. More recent attempts to assess the age of the flesher have produced a date closer to A.D. 600 (Dumond 1987:35). Other questions arise from the redeposited
<table>
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<tr>
<th>TIME (Years B.P.)</th>
<th>PALEOENVIRONMENT</th>
<th>GENERALIZED INTERIOR CULTURAL SEQUENCE</th>
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<tr>
<td>-0</td>
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<td>ATHABASKAN TRADITION</td>
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<td>NATIVE COPPER, TRADE ITEMS, DECORATIVE ITEMS, TCHI THOS, PRESERVATION OF ORGANIC MATERIALS</td>
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<td>-1,000</td>
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<td>SIDE AND CORNER-NOTCHED BIFACES OCCURRING WITH OR WITHOUT MICROBLADES</td>
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<td>-2,000</td>
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<td>BLADE AND CORE TECHNOLOGY (Microblades and burins)</td>
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<td>THERMAL MAXIMUM</td>
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<td>“PALEOINDIAN” LITHIC INDUSTRY (Various bifacial projectile points, no microblades no fluted points)</td>
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<td>-14,000</td>
<td>STEPPE-TUNDRA</td>
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Figure 4. Summary of Cultural and Paleoenvironmental Variables.
Figure 5. Selected Archeological Sites Referenced in the Text.
context in which some of the less obviously worked bones were found. Another site thought to represent similarly early occupation is Bluefish Caves, also located in the northern Canadian Yukon where Pleistocene faunal remains thought to have been butchered by humans have been dated to 15,000 BP (Cinq-Mars 1979; Morlan and Cinq-Mars 1982:353). Neither Old Crow nor Bluefish Caves has yet produced the types or numbers of diagnostic lithic artifacts needed to confirm such early human activity, although research in these areas is continuing.

Another early cultural manifestation, identified in the Nenana Valley just northeast of DENA, may represent occupations by Paleoindian or "Amerind" populations (Goebel and Powers 1989a; Powers and Hoffecker 1989). The Nenana complex has been identified at four sites in the Nenana Valley: Dry Creek (HEA-005), Walker Road (HEA-130), Moose Creek (FAI-206) and Owl Ridge (FAI-091), each of which has been radiocarbon dated between 11,000 and 12,000 BP. A similar assemblage and date has also been identified at the Chugwater site (FAI-035) near Fairbanks (Lively nd). Known Nenana complex sites appear to occupy very similar locations, occurring on loess and sand covered terrace margins at the confluences of side valley streams:

...these localities are universally adjacent to clearwater streams and afford commanding views of the surrounding countryside. Also, they all face south and receive the maximum amount of direct sunlight regardless of the season. In addition, because of the commanding heights, game movements in the valley can be easily monitored [Powers et al. 1983:402].

Researchers have recently suggested that some of the Nenana complex assemblages more closely resemble Clovis assemblages (a certain type of early assemblage found in the continental United States) than the well-known early (Paleoarctic) assemblages of Alaska (Goebel and Powers 1989a).

Diagnostic elements of Nenana complex assemblages include Chindadn points (the small teardrop-shaped points first recovered from Healy Lake), small triangular points, concave based lanceolate points, end scrapers, side scrapers, retouched flakes and blades, cobble tools, perforators and wedges (Goebel and Powers 1989a). The most dramatic difference between the Nenana complex and Paleoarctic components is the absence of the blade and core artifact forms (microblades, microblade cores and burins) considered a key element of Paleoarctic assemblages.

This characteristic reinforces questions about the interpretation of the Chindadn complex defined at the Healy Lake Village site (Cook 1969). The Chindadn assemblage contains microblades as well as bifacial tools (including Chindadn points) similar to those found in Nenana complex assemblages. Due to the presence of microblades, the Chindadn complex has been discussed as a variant of the Paleoarctic tradition, but if microblades are considered intrusive in the Chindadn assemblage, as has been suggested
(Morlan and Cinq-Mars 1982:373), then the Chindadn and Nenana complexes could be technologically linked. Cultural affinities are more difficult to determine however. The cultural sequence at Healy Lake is considered to represent a continuum of developing Athabaskan culture, but this interpretation could be challenged if the Chindadn complex is tied to the presumably Paleoindian origins of the Nenana complex.

Many important questions about the Nenana complex remain. For example, it is not clear why the distinctive fluted projectile points found in classic Clovis assemblages are absent from Nenana complex assemblages. Additional research may eventually offer conclusive evidence in support of the "Amerind" multiple-migration theory discussed in the preceding Culture History section.

The Paleoarctic Tradition (11,000 BP to 8,000 BP)

The American Paleo-Arctic tradition is a term originally used by Anderson (1968a, 1970) to describe early stone tool complexes in northwestern Alaska. The Paleoarctic concept has since been broadened and extended to other areas in Alaska (Bacon 1986; Dumond 1987). Paleoarctic assemblages are found on both sides of the Bering Sea. These components date between 11,000 BP and 8,000 BP and are characterized by products of a distinctive blade and core technology manifested by small, wedge-shaped blade cores (also known in Alaska as Campus type microcores after the University of Alaska Fairbanks site from which they were first recovered) that are preshaped before blade removal. The small, parallel-sided blades removed from these particular cores are known as microblades and are often less than five centimeters in length. Paleoarctic assemblages are also characterized by inter-site diversity and apparently specialized implements, as shown by the presence or absence of bifaces and various forms of burins (Jennings 1978).

Sites with Paleoarctic components are often found in areas that either remained unglaciated during the latest major glacial episodes or were deglaciated early (Dumond 1978:26-27; Jennings 1978:50). Most researchers agree that the Paleoarctic environment for much of Alaska, from Beringia to the Yukon-Tanana uplands, was a cooler and drier environment characterized by treeless grasslands and tundra quite different from the tundra known today (Cook 1969:381; Dumond 1978). Even during peak glacial episodes considerable portions of the interior region remained an ice-free refuge for flora and fauna. According to one reconstruction of the Pleistocene periglacial environment:

Glacial climate in the Interior was different from that of today. It may have been colder, but certainly there was more wind and less moisture. We know from the mammals that lived in Alaska during the glacials that there could have been little snow cover. What snow did fall was probably re-sorted and packed in drifts, much as it is now in mountain pass areas of
Delta Junction and Healy. With so little moisture there must have been clear weather most of the year, with high clouds building in the summer and sparkling starlit nights in the winter. The clear skies would have made summers quite warm with deep thaws, but by the same token winters would have been cold with the loss of heat to the black night sky. On the other hand, winter winds, which we seldom have today, would have upset any tendency for heavy colder air to accumulate in the lowlands. So the glacial climate may have actually been warmer in the lowlands and cooler in the uplands [Guthrie 1986:57].

Most of the Paleoarctic archeological components identified in Alaska represent seasonally occupied hunting camps, making detailed reconstruction of the complete prehistoric economy difficult. The following describes the proposed settlement pattern for this time period, based on research at the Dry Creek site:

The character of the Dry Creek site has led us to conclude that it was a "spike camp", a secondary, short term encampment, used primarily to spot game (its position on an exposed prominence); to prepare game for retransport (the presence of knives and worn large flakes); and to manufacture and repair hunting tools (the presence of the complete microblade manufacture sequences and broken bifaces). The "permanent camp" aspect of the tool assemblage is poorly represented, worn end scrapers and leather working tools are rare. These are not elaborate habitation areas with indications of long-term use, nor are there house pits or tent-ring stones, center postholes or the like, although the camp is positioned on an exposed windy prominence.

Interestingly, many of the early sites in Siberia are characterized by these same features: heterogenous fauna, few end scrapers, a predominance of points and knife-like tools, and locations on river terrace or moraine prominences overlooking areas where big game frequently travel (Mochanov 1977).

I would like to argue that these frequent Siberian camps along with those of the Denali complex, the Campus Site, and most other northern sites in the 12-8000 BP range are part of a land-use system which involved a moderately stable base camp and numerous outlier spike camps. Hunters used these spike camps in a radiating pattern away from the main hub, the more permanent base, like the web of an orb spider [Powers et al. 1983:268-269].

Paleoarctic subsistence revolved around hunting grazing mammals attracted to the rich grasslands adjacent to glacial areas:
A possible reason for locating near active glaciers stems from the proposed existence within late Wisconsinan Beringia (i.e., that area composed of the exposed Bering Platform and adjacent unglaciated portions of Alaska, Canada, and Siberia) of a relatively xerophytic steppe environment dominated by grass and Artemisia, upon which would have fattened herds of grazing animals such as elephant, bison, and horse, and which would have been significantly more productive than any portion of terrestrial Alaska was to be in the Holocene [Dumond 1980].

Species represented in some of the few Paleoarctic sites with identifiable faunal assemblages include horse, bison, caribou, moose, wolf, fox, hare, ptarmigan, duck and bear from the Trail Creek Caves site (Larsen 1968), bison, sheep, elk and ptarmigan from Dry Creek (Dumond 1980:25; Powers and Hamilton 1978; Thorson and Hamilton 1977), small mammal and bird bones from the Garden Site at Healy Lake (Cook 1969), possibly caribou from the Akmak component at Onion Portage (Anderson 1970, 1978) and caribou, sheep and ground squirrel from the Carlo Creek site (Bowers 1978). Researchers have yet to identify extinct Pleistocene fauna, mammoth for example, in direct, undisputed context with cultural material (Dixon 1985).

Within the broad and geographically widespread Paleoarctic tradition, researchers have defined regional variants in several archeological assemblages. Most notable for Interior Alaska is the Denali complex, as seen in Component II at the Dry Creek site in the Central Alaska Range (Powers et al. 1983), and the Chindadn complex, at Healy Lake in the Yukon-Tanana Uplands (Cook 1969).

The Denali complex was originally identified on the basis of artifact typology in assemblages from four Interior Alaska sites; the Campus Site at the University of Alaska Fairbanks, the Donnelly Ridge site near Paxson, and the Teklanika sites located within Denali National Park (West 1967). Assemblages attributed to the Denali complex have been dated between 12,000 and 8,000 BP and are characterized by prepared, wedge-shaped (often called Campus type) microblade cores, microblades, burins, scrapers and bifacially flaked knives (Dumond 1987:40; West 1967). More recent research has caused reinterpretation of the Denali complex by some as a possibly lengthy and continuous cultural complex, particularly in light of contradictory radiocarbon dates from the Campus site that suggest a much later occupation around 3,000 BP (Mobley 1985). Other assemblages have yielded Denali complex material in similar time periods (Cook and McKennan 1970a, 1970b). Several researchers have suggested that the early and late aspects of the Denali complex may represent two cultural entities with an as yet undetermined relationship, the latter of which has affinities with the Northern Archaic tradition (Bacon 1986, 1977; Dumond 1987; Holmes 1974). Photographs of West's 1965 Teklanika artifact assemblage (Appendix D) illustrate many of the classic Denali complex artifact forms.

The Dry Creek site (HEA-005) is perhaps the best example of an Interior Alaska...
archeological site with a well documented Paleoarctic component. The earliest Dry Creek component, Component 1 (representative of the Nenana complex) has been previously discussed as distinct from later Paleoarctic occupations. Component II dates to approximately 10,000 BP and yielded a large assemblage which includes microblades and is considered representative of the Denali complex. Perhaps the most important characteristic of the Component II assemblage lies in the distribution of artifacts within the component. Analysis revealed distinct clusters of artifacts, interpreted as discrete activity areas, some of which did not contain microblades (Powers et al. 1983).

It is unclear whether the intra-site distinctions at Dry Creek are the result of different activities, only some of which were related to microblade use and manufacture, or perhaps separate visits to the site by different cultural groups with different technologies. Other Denali complex assemblages in the Nenana Valley have revealed still different patterns of artifact distribution. For example, Component I at the nearby Carlo Creek site (HEA-031) lacks the classic Paleoarctic blade and core technology altogether (Bowers 1980), while Component II at the Panguingue Creek site (HEA-137), includes blade and core technology and bifaces, but lacks evidence of the spatial clustering found at Dry Creek (Powers and Maxwell 1986).

The lower levels or horizons at the multi-component Healy Lake Village site (XBD-020) are also important to a discussion of the Paleoarctic tradition. The cultural sequence at the site has been interpreted as a continuous Athabaskan occupation although, as discussed above, possible affinities with the Nenana complex may point to a different interpretation.

The Chindadn complex was originally identified at the Village site (Cook 1969) and is characterized by small, thin, triangular projectile points, microblades and burins. Radiocarbon dates place the Chindadn complex between 10,500 and 8,000 BP.

Level 9, the "Early" horizon, revealed an assemblage characterized by an absence of projectile points and a well-established core and microblade technology as well as a burin industry (Cook 1969:258, 278). The "Early" horizon was radiocarbon dated to approximately 11,000 BP. The somewhat later "Quartzite" horizon, radiocarbon dated to approximately 9,000 BP, revealed an assemblage that includes small, very thin triangular projectile points, which Cook termed Chindadn points, burins, "a relative lack of microblades" and no microblade cores, indicating a de-emphasis on microblade technology (Cook 1969:257, 337). Cook suggested that the Early and Quartzite levels be considered a single unit for interpretive purposes, as the elements that permit differentiation (most notably quartzite scrapers and very small end scrapers made from other lithic materials) may be a unique, local phenomenon (Cook 1969:333). Eventually the term Chindadn was extended to the entire early complex at Healy Lake, and has since been applied, on a comparative basis, to a number of other early assemblages (Cook 1969).
In trying to relate the Chindadn assemblage to the Nenana complex, some researchers have suggested that the Chindadn microblades are out of context, perhaps intrusive from later occupations at the site (Morlan and Cinq-Mars 1982:373). This issue may be resolved with a refined definition of the Nenana complex.

The Northern Archaic Tradition (6,000 BP to 4,400 BP)

The time period between 10,000 BP and 5,000 BP was marked by dramatic environmental change that culminated with the peak of post-glacial climatic warming, termed the thermal maximum, by 4,000 BP. Correspondingly, the region experienced a marked expansion of the boreal forest by 5,000 BP, with the edge of the northern forest extending farther north than it does today (Anderson 1968a). These events correlate in time with the recognition of the Northern Archaic tradition, a term originally applied to technologically distinct assemblages in northwest Alaska and later extended to assemblages in the Interior (Anderson 1968a). Although some researchers interpret the Northern Archaic tradition as ancestral to a developing Athabaskan cultural pattern (Aigner 1986:130), the existing archeological record does not necessarily support an Athabaskan ethnic identity for Northern Archaic peoples.

The Northern Archaic is perhaps the most complex cultural tradition discussed here. The temporal, spatial and cultural attributes of Northern Archaic components vary so significantly that common characteristics are difficult to define:

If one attempts to develop a composite understanding of the Northern Archaic by incorporating its many attributes from the differing formulations in the literature a very complicated cultural-historical entity emerges which displays differing ecological adaptations, artifact variability, and both a considerable temporal and spatial spread. Its sites are found in the taiga (Anderson 1968; Dumond 1978) and on the tundra (Gal and Hall 1982; Davis, Link, Schoenberg and Shields 1981). While notched points are important throughout, stemmed or even lanceolate points can also form a significant part of the assemblages (Anderson 1978). Any one of these combinations of point styles can co-occur with microblades or microblades may be completely absent (Anderson 1968a and b). The microblades may have been detached from tabular Tuktu cores (Anderson 1978; Campbell 1961) or from wedge-shaped Denali cores (Cook and McKennan 1970)[Powers et al. 1983:393].

Like the Paleoarctic archeological record, few Northern Archaic sites allow for a detailed economic reconstruction. Research from Interior sites suggests a generalized hunting strategy focusing on available species such as caribou, moose, bear, and smaller animals (Dumond 1980:33-34).
The technological differences between Paleoarctic and Northern Archaic peoples, most notably the sudden appearance of large side and corner-notched projectile points, can be linked to environmental change (the decline of the arctic-steppe and expansion of the spruce forest). The most widely held interpretation explains the new tool forms as a diffusion of new ideas, brought by groups expanding into the emerging boreal forest from other regions (Anderson 1968; Workman 1978). This does not mean that new, notched-point-using groups abruptly replaced the resident, microblade-using populations however. The coexistence of notched-points and microblades in some Northern Archaic assemblages indicates that microblades persisted into the Northern Archaic time period (Betts 1987). Several sources contend that such mixed (microblade-notched point) assemblages may be the result of cultural exchanges between the migrating notched-point-using peoples and the resident microblade-using peoples descended from Paleoarctic peoples (Dumond 1987; Schoenberg 1985). The following describes both notched-point and mixed variants of the Northern Archaic tradition, beginning with the Palisades II assemblage (which lacks microblades) and the Tuktu complex (which contains both microblades and notched points).

The classic example of the Northern Archaic tradition is the Palisades complex, first identified at Cape Krusenstern (Giddings 1967), and best illustrated by the Palisades II component at the Onion Portage site on the Kobuk River (Anderson 1968a, 1986). Palisade II assemblages, dating between 6,000 BP and 4,600 BP, include asymmetrical side-notched points with deep, wide notches and convex bases, end scrapers and large, unifacially chipped knives. Later stages of the same complex are characterized by similar, but somewhat shorter points and the notched pebbles thought to be used as hafted axes. Still later, the bases of the side-notched points evolve into stems shaped by corner notching. Notched water-worn pebbles thought to represent sinkers and some slate objects are also found in late stages of the Palisades complex (Dumond 1987:47-50).

The Tuktu assemblage, recovered at Anaktuvuk Pass in the Brooks Range, yielded side-notched points very similar to those in the Palisades assemblages, in addition to a well-represented microblade industry (Campbell 1961). The assemblage has been radiocarbon dated to 6,000 BP (Gal 1982) but the site is not well stratified and interpretive problems have been suggested. While the presence of microblades in the Tuktu assemblage is considered by some to demonstrate technological continuity with the earlier, Paleoarctic microblade assemblages, the Tuktu microblades differ from those associated with Paleoarctic assemblages, in that they were removed from tabular rather than wedge-shaped (Campus type) cores. The term Tuktu has since been applied to other Northern Archaic notched point-microblade assemblages.

The Kurupa Phase, identified near Kurupa Lake in the Brooks Range, appears to have several elements in common with the Tuktu complex, including a microblade and burin industry, side-notched points, and tabular microcores (Schoenberg 1985:142). Based on eight such Northern Archaic assemblages, Schoenberg concluded that the Kurupa
area was heavily used by "...people using a mixture of Paleo-arctic and Northern Archaic technologies" (1985:144), and that such use may "...represent another wave of microblade and burin and slotted-composite point using peoples who were contemporaneous with, and acculturated, to varying degree, to groups of the Northern Archaic tradition" (1985:152).

The Healy Lake Village Site also revealed a Northern Archaic notched point and microblade assemblage (Level 3) very similar to the Tuktu assemblage (Cook 1969:324), although problems with stratigraphic control at the site coupled with the lack of radiocarbon dating for this level have caused problems in interpretation.

Other Interior Alaska Northern Archaic assemblages that contain notched points and microblades include, but are not limited to, assemblages at Lake Minchumina in the Central Interior (Holmes 1986), and the Butte Lake site in the Alaska Range (Betts 1987). Component II at Butte Lake has been radiocarbon dated to approximately 5,000 BP, making it one of the earliest of the dated sites under consideration here (Betts 1987:87). The Raspberry phase at Lake Minchumina has been dated to approximately 1,200 BP, although the date was obtained from bone that may have resulted in a somewhat more recent date (Holmes 1986).

Component IV at Dry Creek has been described as "...fully consistent with the definition of the Northern Archaic proposed by Dumond (1977)" (Powers et al. 1983:395). Recovered artifacts include notched points, larger, more crudely worked implements, and an absence of microblades. In all respects, the assemblage is dramatically different from Component II. This disparity is particularly illustrative of problems in determining whether the Paleoarctic and Northern Archaic peoples were part of a cultural continuum, or the Northern Archaic peoples represented a distinct cultural group moving into a new area:

...where Component IV is compared with Component II we are struck by the fact that they share not a single artifact type except retouched flakes. Our view of the situation from the Nenana Valley at the present time is that the early microblade and biface technologies of Component II and the artifacts from Component IV are as different as night and day. There are simply no grounds for developing the idea of continuity between Components II and IV.

Based on evidence from the Dry Creek site, the proposition that an entirely different population had occupied the Nenana Valley during the mid-Holocene would appear completely justified. However, evidence from other areas of Alaska summarized above points to the fact that Dry Creek is more the exception than the rule. Since side-notched points similar to those in Component IV do occur with microblades elsewhere, their absence at Dry Creek should be viewed cautiously. The Component IV
The Arctic Small Tool Tradition (4,000 BP to 3,000 BP)

While not commonly included in discussions of Interior Alaska chronology, the coastal-based Arctic Small Tool tradition has been identified in Interior sites in Canada (Dumond 1987:53, 93) and alluded to at sites in the vicinity of the park (Irving 1957; Powers 1983:431).

The Arctic Small Tool tradition was first identified in an assemblage at Cape Denbigh on the Northwest Alaska coast (Irving 1962) and has subsequently been identified in similar assemblages along a widespread coastal-dominated region extending from Bristol Bay and the Alaska Peninsula, across the top of the North American continent to Greenland (Dumond 1987; Giddings 1949, 1951, 1964; Irving 1962). Where Arctic Small Tool assemblages are found in Interior settings, they often occupy riverine environments located inland from coastline, like Onion Portage in Northwest Alaska and the Aberdeen site in the Barren Grounds/Hudson Bay region in Canada. Arctic Small Tool assemblages are also well known in the Brooks Range, inland from the arctic coastal plain (Dumond 1987:93).

Arctic Small Tool assemblages have been interpreted as the remains of small hunting camps apparently geared toward specialized hunting: caribou hunting at Onion Portage and other inland locales, seasonal seal hunting and fishing at coastal sites. The key elements of the Arctic Small Tool tradition include very small, well-made tools that include bipointed endblades and sideblades, burins struck on small bifaces, microblades,
scrapers, and large bifaces. In some cases, small adze blades with polished bits and polished burin-like implements are also noted. Houses have been excavated at only four locations, including Onion Portage, revealing small, round or somewhat square, semi-subterranean houses with sunken tunnels for entrances that are thought to have been occupied in the winter (Dumond 1987).

The relationship between Northern Archaic peoples and those of the Arctic Small Tool tradition is not clearly defined. The most widely held interpretation views the Arctic Small Tool peoples as culturally discontinuous with the Northern Archaic. According to one researcher:

Wherever cultural deposits of the Arctic Small Tool tradition occur in Alaska they seem to constitute a break in the continuity of occupation at a site. Where predecessors are known, they were people of the Northern Archaic tradition, who, after the interruption of the Small Tool peoples along the coastline, apparently withdrew to thrive in the forested regions inland [Dumond 1987:85-86].

The fact that coastal-based cultural elements do find their way into Interior assemblages, as indicated by the Ipiutak occupations at Lake Minchumina (Holmes 1986), and the Eskimo influences observed at Klo-kut in the Porcupine drainage (Morlan 1973) and elsewhere, demonstrates that the Interior was not isolated from the cultures of the coastal regions. But in light of very comprehensive research in the Susitna drainage (Dixon et al. 1985; Greiser et al. 1985), the Nenana Valley (Powers et al. 1983) and elsewhere in the North Alaska Range, the Arctic Small Tool tradition has not appeared as an important cultural element in the Denali area.

The Athabaskan Tradition (1,500 BP to Historic Times)

Researchers do not agree how far back into the past the Athabaskan tradition can be traced. Some sources have interpreted the entire chronological sequence for the Interior as a continuous development characterized by long-term in situ cultural development. They see the wide variability demonstrated by historic period Athabaskan groups as evidence of increased diversity and specialization derived from long term occupation and adaptation (Cook 1975). These sources consider the development of the recognizable Athabaskan cultural pattern to have begun with the major environmental and adaptive changes that preceded the Northern Archaic tradition, roughly 6,000 years ago (Aigner 1986:130).

In contrast to this point of view, others have suggested that two distinct populations inhabited the Interior through time, having crossed Beringia in separate migrations. The earliest peoples, or "Amerinds", are thought to be represented by the poorly known, very early archeological components (such as the Nenana complex) in Alaska. The
recognizably Athabaskan cultures are thought to represent a later migration (Aigner 1986:112-114). These ancestors of today’s Athabaskans appear to have diverged from an ancestral population, perhaps as much as 15,000 years ago, before migrating into Beringia (Greenberg et al. 1986:487). On the basis of linguistic evidence, one source has suggested that 3,000 years may have elapsed since the numerous Athabaskan dialects diverged from a common language (Krauss 1972), but the actual arrival of Athabaskan populations into the New World may have taken place much earlier.

Perhaps the best evidence of continuous Athabaskan occupation was recovered from the Village (XBD-020) and Garden (XMH-204) sites at Healy Lake (Cook 1969; Cook and McKennan 1970). At Healy Lake, all but the lowest levels (previously discussed as part of the Paleoarctic tradition) have been described as representative of a developing Athabaskan tradition. These levels are further separated into four phases, the most recent of which was defined by the recognizable materials of an historic Athabaskan band. The three subsurface levels include a poorly defined stratum with microblades, a Denali phase stratum with Campus-type cores, microblades and burins, notched and stemmed and lanceolate projectile points, and a level thought to represent a local variant of the Tuktu phase. Based upon the radiocarbon chronology from the site, the Athabaskan tradition was identified as beginning as early as 11,000 BP.

For this discussion however, the term Athabaskan tradition will describe the ethnographically identified Athabaskan cultural pattern that followed the Northern Archaic tradition; this usage is distinct from the concept of a prehistoric Athabaskan ethnic group from which modern-day Athabaskans descended. Perhaps the most notable characteristic of the ethnographically recorded Athabaskan peoples is a cultural pattern characterized by cultural diversity and specialization. As discussed in the following Ethnographic Overview, the traditional Athabaskan way of life was based on opportunistic hunting and gathering. The annual subsistence round was defined by the specific resources available in each group’s territory. Thus, a group with access to sizeable, dependable salmon runs would pursue a different subsistence focus and seasonal pattern than a group that lacked access to fish and was more dependent on game animals:

Regional variations in social organization, culture, settlement pattern, and technology arose from the slight variations in environmental variables with which each group had to cope. Above all else, the Athabaskan culture before the white man appeared to be flexible and adaptive [Reckord 1983:30].

For Athabaskans, traditional settlement patterns consisted of winter villages with well-built, multi-family structures near major rivers and tributaries, and temporary camps that served as bases for various subsistence tasks, such as hunting, fishing and fish processing. These camps could represent single-use areas or areas that were reoccupied year after year (Workman 1976).
The caching or storing of seasonally surplus foods was an important adaptive mechanism that enabled Athabaskan peoples to survive leaner periods that occurred within the annual cycle, especially around March and April. As summarized by one source for the Ahtna, a variety of cache types have been identified:

Another type of permanent structure used by the Ahtna, the underground cache, was apparently built within a convenient distance of the winter settlements, for it was in winter that they were gradually emptied. At the same time, they had to be within a somewhat convenient distance of the summer fish camps, because they were filled primarily with the summer's salmon catch. Thus, the winter village was often located near the summer fish camp [Arndt 1977:19].

Generalized cultural elements associated with Athabaskan sites include evidence of a growing aboriginal trade network (obsidian and copper items for example) and possibly evidence of an increased population, as seen in an expanded distribution of Athabaskan sites by 1,000 BP (Cook 1975). Material cultural elements associated with Athabaskan sites include a relative absence of finely worked stone tools, apparently indicative of a greater reliance on bone and antler tools, decorative items such as beads and buttons, split boulder-spall scrapers (tchi thos) or thin tabular slabs of schist that are thought to have been used for skin scraping, unilaterally barbed bone points, bone gaming pieces, caribou tibia scrapers (fleshers), and the geometric embellishment of bone and antler artifacts (Cook 1975).

While few Athabaskan archeological sites have been located and systematically excavated, a number of examples have yielded important information about late prehistoric or protohistoric Athabaskan culture. Several archeologists have excavated late period sites around Lake Minchumina (Holmes 1986:20-22). One of these sites, MMK-004, contains a component that is considered to be protohistoric Athabaskan (Holmes 1986:158). Although the least well known of the five phases identified at MMK-004, the Spruce Gum phase supported the characterization of late Athabaskan technology as showing increased use of copper and decreased use of lithic implements. Tools included native copper tools, endscrapers, groundstone adzes, and a short, blunt projectile point. Burial by cremation, an ethnographically documented Athabaskan trait, was also present in the Spruce Gum phase (Holmes 1986:158).

Among the region's best-known Athabaskan sites are GUL-077 near Gulkana (Workman 1976), Dakah De'nin's village near Chitina (Shinkwin 1979), Dixthada, a village located near Mansfield Lake in the Upper Tanana Valley (Shinkwin 1979), and two sites at Paxson Lake along the Gulkana River (Ketz 1983).

GUL-077 is a network of seasonally occupied, task-specific, late winter-early spring camps and food storage areas. The data suggest that beaver was the most commonly harvested food source at the encampments, with red squirrel, various other mammals
and small amounts of fish also present. Material goods collected from the site include abundant native copper (including projectile points, knives, perforators and ornaments), a well-developed bone and antler tool industry (including barbed points, split metatarsal beamers and ornamental pins), flaked lithic endscrapers, wedges, burins, retouched flakes and boulder spalls, and whetstones and various ground stone tools. Only one area contained European material, an unusual iron knife, in definite association with aboriginal artifacts. Radiocarbon dates were obtained from four localities at the site. The dates suggest a main occupation between approximately 500 BP and 1,000 BP, although the area may have been used over a considerable period of time:

There is some evidence that the area was occupied at least sporadically as a camping area for several centuries. Cache pit construction and sporadic use continued until the time of the coming of the Europeans and an occasional family or small group camped there as recently as c. 1800. Large scale utilization of the area as a living site apparently ceased by or shortly after 1500 A.D. at the latest [Workman 1976:147].

Research at GUL-077 suggests cultural, linguistic and technological continuity between the prehistoric inhabitants of GUL-077 and the historic Athabaskan inhabitants of the area, the Ahtna.

Dakah De‘nin’s village is located along a bluff overlooking the Copper River. The village represents a large, early nineteenth century Ahtna winter settlement with nine housepits, several sweatbaths and cache pits. Two houses with attached sweatbaths were excavated at the site in 1973, revealing three successive occupation levels which have been dated, on the basis of tree ring chronology, from 1816 to 1838. Artifacts collected from the houses appear to support the suggested dates. Recovered artifacts included trade goods (beads, iron goods), copper and bone points, copper awls and needles, woodworking chisels, boulder spall hide scrapers, copper knives, an ivory harpoon head, whetstones, hammerstones, grinding stones and ornamental items (dentalia, trade beads, shell beads, a shell pendant).

Faunal remains collected from the site include large amounts of salmon, grayling, several species of mammals (including hare, porcupine, arctic ground squirrel, bear, beaver, lynx, and wolf) and birds. A clam shell fragment was also identified. Given that fish could be dried and consumed during the entire year, no definite season of use was reported at the site.

Dixthada is another site consisting of multiple semi-subterranean housepits, storage pits and tent rings. Early excavations of middens at the site (Rainey 1939) suggested that there were three distinct periods of occupation, one of which was pre-contact. Later investigation of the middens yielded radiocarbon dates indicating occupation around 300 BP. The third date, associated with a microblade, suggests a considerably older occupation dating to approximately 2,400 BP (Lawn 1974).
Artifacts that represent the traditional way of life included implements of copper (points, awls, pins, beads, and several unidentified and fragmented objects), bone and antler (points, barbed points, awls, a drinking tube, a beamer, a knife and incised objects), as well as large and small bifacial projectile points with stems, broad bifaces with convex edges, boulder spall scrapers, microcores, core tablets, microblades, transverse burins, and a variety of scrapers and retouched flakes.

Analysis of the Dixthada material has suggested that not all of the features at the site occurred at the same time. The middens and houses are thought to represent the remains of a seasonally occupied, semi-permanent summer village, perhaps related to communal fishing.

A series of sites at Paxson Lake have been interpreted as late nineteenth century caribou hunting camps or stations, occupied during the spring herd migrations (Ketz 1983). The discovery of spring-season occupations was especially fortunate, as previous settlement and subsistence information was based on the winter occupation at Dakah De'nin's village, the late-winter/early spring occupation at GUL-077, and the summer occupations at Dixthada. Archeologists found little evidence to indicate the specific method(s) of hunting, but the presence of whole caribou skeletons, in addition to other factors, suggests that both sites functioned as primary butchering and processing locales (Yesner 1980:17, 20-21).

Many of the tools recovered during excavation support this interpretation, especially the serrated bone and boulder spall scrapers, used for defleshing and tanning hides. Although furbearing animals (muskrat, beaver, wolverine, wolf and mink) were also recovered from Paxson Lake, it was not possible to determine the role that commercial fur trading played in the economy.
Ethnographic Overview

Ethnographic Analogy and Archeological Reconstruction

Ethnography, a subdiscipline of cultural anthropology, is concerned with the systematic description of the lifeways or cultural patterns of existing societies and ethnic groups. The main "tools" of the ethnographer are first-hand observation, interviews, a wide range of historical materials (such as photographs, census records, letters, diaries, and journals), oral literature, and other documentary records. Archeology and ethnography are often mutually supportive. Archeological evidence may be incorporated into an ethnography and, conversely, ethnography can be an important aid in archeological interpretation, especially of early historic sites. This practice, known as ethnographic analogy, is a well established part of archeological research (Anderson 1969; Ascher 1961; Binford 1967, 1978; Steward 1942). It is important, however, to consider appropriate limits in using the documented ethnographic pattern to explain prehistoric culture.

Ethnographic analogy is particularly appropriate for regions in which the environment has remained stable over time and a long-term in situ cultural development is well documented (Anderson 1969). In the absence of these characteristics however, the assumption of cultural continuity may obscure more complex interpretations. The latter case is particularly relevant for Alaska's Interior, where archeologists and ethnographers loose the thread of recognizable Athabaskan culture sometime before the historic period. As discussed in the Culture History section, researchers are still working to establish the ethnic identity of the groups who occupied the Interior during prehistoric times. Many researchers recognize the development of the Athabaskan cultural pattern as beginning 6,000 years ago. Other interpretations range from 1,500 to 14,000 years ago, but most researchers caution against projecting the Athabaskan lifeway recorded by ethnographers that far into the past.

And yet there are aspects of culture for which the archeologist is totally dependent upon ethnography. A good example is a recent Koyukon study that incorporated material-culture oriented archeological models with information about the cultural belief system in order to document land use practices (Arundale and Jones 1989). The study identified several ways in which the Koyukon belief system would strongly influence the archeological record.

Possibly the optimal use of ethnographic analogy is as one dimension of archeological interpretation. Ethnographic observations are essential to good archeological interpretation but direct comparisons between prehistoric and historic cultural systems are not always appropriate. For the groups under consideration here, this caution applies to the assumption of an Athabaskan ethnic link with prehistoric cultural remains.
The following section, prepared by Dianne Gudgel-Holmes, provides an overview of ethnographic information for the five Athabaskan groups known to have been well established in DENA by the time of European contact; the Tanaina, the Ahtna, the Lower Tanana, the Koyukon, and the Upper Kuskokwim or Kolchan (Figure 6). More detailed, group-specific information (also prepared by Gudgel-Holmes), has been included as an appendix to the Overview and Assessment (Appendix C). Both sections attempt to portray aboriginal Athabaskan life during the 'ethnographic present', the time period just prior to European contact. In the Denali region, the ethnographic present ranges from the early to late 19th century, depending upon which sub-group is being considered. It is a time that is no longer remembered in detail by the people themselves, but can be reconstructed with reasonable, but limited accuracy through published and unpublished historical accounts, ethnogeography, archeology, and earlier ethnographic studies. This information is intended to familiarize land managers with the most recent ethnic group to inhabit DENA--Athabaskans--and aid them, within the stated limits, in interpreting and assessing the park's cultural resources.

Athabaskan Lifeways

The land encompassing DENA has been the homeland of native Americans for thousands of years. The most recent groups to live there were Athabaskan Indians who moved freely from one ecological zone to another harvesting, in timely fashion, the resources upon which their existence depended. Park boundaries, necessary for today's administrative and land management purposes, were of course not known to the Athabaskans whose only limits were those imposed by a changing environment and the territoriality of neighboring Athabaskans. In order to recreate land use patterns and lifeways for the DENA area as they may have existed just before the time of direct contact with Euro-Americans in the early nineteenth century, it is necessary to consider a region larger than DENA unencumbered by artificial boundaries.

The quality and quantity of ethnographic data are very uneven for the five Athabaskan groups who used DENA. The Russian presence along the coast (late 1700s) and middle Kuskokwim River (mid 1800s) allowed early explorers to make important ethnographic comments on natives who interacted with aboriginal groups in the vicinity of DENA, but direct observations of the Athabaskans nearest the park did not come until 1898-1900. Some oral accounts of seasonal use of park land are available from native elders who used the area earlier this century. In other cases only a few native place names hint that a particular group used the area. Place names, however, may actually be the best documentation of land use, because through them the natural and human history is preserved (Kari and Fall 1987:29).

Ethnographic information is scarcest for groups east and northeast of DENA. This may reflect less use of the area 100 years ago, but more likely it means contact (and recorded observation) was made after significant pre-contact shifts in territory took
Few of the five native groups using DENA have been described in formal ethnographies. Those that have ethnographies (Osgood 1966; Hosley 1966) do not provide the detail necessary for determining land use patterns in DENA. The territory of some of the groups has been so drastically altered in the last few hundred years that evidence of land use near DENA can only be deduced from a few remarks by early explorers and from some native place names derived from ethnogeography studies. Thus, it is imperative to employ all possible sources for this brief illustration of aboriginal life and land use.

One of the most useful sources is the ethnogeographical study Shem Pete's Alaska (Kari and Fall 1987). From it, land use patterns nearest DENA have been deduced from the translations of Tanaima and Ahtna place names and the annotations accompanying them. An interview with Nenana elder Paul George is another useful source of information on the Nenana/Toklat seasonal round.

The reconstruction of aboriginal life is complicated by the fact that European trade items, such as metal tools, traps, guns, and tobacco, reached the Indians through an extensive trade network long before direct contact was made with Euro-Americans. As a result, there was an acceleration in the normal rate of change in settlement patterns, social and material culture. Social culture was especially affected; increased trade in furs dominated this change, along with the introduction of firearms which allowed for more individual rather than communal hunting (Hosley 1981:546). Early trade networks through Siberia in the 1700s, and later at coastal trading posts, prompted shifts in territorial boundaries to accommodate groups' participation in this trading system. These shifts may mean that ethnographic reconstructions of aboriginal territories (including settlement and land use patterns), drafted from explorers observations in the latter nineteenth century, lack historical depth beyond about 1800 (VanStone and Goddard 1981:561). Therefore, it is probably impossible to accurately portray native life and territory preceding the advent of Western culture. In this section and in the appendix, an attempt is made to summarize aboriginal lifeways and the specific land use patterns of the various Athabaskan groups who lived in and around DENA in the early nineteenth century. The deficiencies of knowledge and patterns particularly altered through Euro-American contact are noted.

Some Athabaskan elders today still believe in the efficacy of the old religion and the matrilineal social system is still evident in daily life. But in most instances Athabaskan life today no longer resembles the following account. Some cultural characteristics have persisted however, especially in regard to Athabaskans' relationship to the land. Many Athabaskan's combine seasonal wage employment with subsistence. Their relationship to the land played a key role in the negotiations of the Alaska Native Claims Settlement Act of 1971.
Language Groups Around DENA

Athabaskan material culture and ethnic identity may be traced back 1,000 years according to some archeologists—1,500 years or more according to linguistic evidence (Holmes 1986:159; Kari and Fall 1987:13-14). Five separate groups of Athabaskan-speaking Indians are known to have lived on or seasonally utilized lands in and around DENA during the past few hundred years: Ahtna, Tanaina (Dena'ina), Upper Kuskokwim (Kolchan), Lower Tanana, and Koyukon (Figure 6). Presently, some members of these groups live in the nearby communities of Cantwell, Telida, Tanana, and Nenana, or elsewhere throughout the state.

Northern Athabaskans, including the groups considered in this report, spoke languages belonging to the Athabaskan branch of the Na-Dene speech family that was widespread in northwestern North America and in pockets in California and Arizona. Each of the five groups around DENA spoke a distinct Athabaskan language mutually unintelligible to neighboring Athabaskans, except where frequent social contact, particularly along territorial borders, facilitated understanding. The exception was between the Upper Kuskokwim and Lower Tanana languages which were partially intelligible and are believed to have been at one time part of the same dialect chain (Krauss and Golla 1981:67,75).

Linguistic diffusion was common among neighboring groups because language boundaries were not precise. Language was often a continuum of shared linguistic characteristics; the Ahtna and Tanaina were such an example (Kari and Fall 1987:185). Even Russian words (loanwords) were incorporated in the five languages. In other cases, however, such as with Koyukon and Kutchin, the division between language groups was so sharp there was no mutual intelligibility (Krauss and Golla 1981:72-75). The appendix contains a detailed description of the languages of Athabaskans surrounding DENA.

Settlement and Society

Northern Athabaskans inhabited the boreal forest and were considered primarily large game hunters, with salmon (and in one instance marine mammals) being a dominant feature of their seasonal round when available. The subarctic climate prescribed considerable flexibility and mobility in order to successfully execute a subsistence-based economy within the confines of loosely defined territories. Socially, Athabaskans lived in small groups of related people and recognized their descent through the maternal line. These groups were continually coalescing and dispersing throughout the year as the seasonal needs of the hunting and fishing economy dictated. Politically, the Athabaskans did not form distinct political units and as such may not be called a collection of tribes as much as they may be described as forming a "cultural continuum carried on by a series of interlocking groups whose individual lifeways differed only in certain minor details from those of their immediate neighbors" (VanStone 1974:8).
Figure 6. Language and Territory (after Krauss 1982).
Semipermanent villages, consisting of many dwellings, each shared by several families, formed the primary winter settlement; villages for the more sedentary groups, where salmon played a major role in the economy, had larger populations. Other types of settlements consisted of seasonally-used hunting and fishing camps, and single-use kill sites.

Seasonal Round

The seasonal cycle was characterized by a great deal of well-planned movement (Figure 7). The movement occurred within familiar territories for the conscious objective of securing food and raw materials. The habits and movements of animals and fish were understood. Raw materials were gathered from known locations or acquired through trade. Technologies were developed to overcome environmental obstacles in locating, obtaining and storing the necessities of life. Distant kinship ties and trading partner links were social mechanisms that evolved, in part, to cope with the inevitable periods of resource deprivation; the differences in regional resources even a few miles apart could strongly affect survival. These small variations in resource distribution and availability, made the seasonal cycle of each Athabaskan group and subgroup different from one another. Each group followed a unique schedule. Salmon might appear a month earlier in some Tanaina territorial streams than in the Koyukon area. Summer caribou hunting may have been more profitable for the Koyukon, while salmon were sought primarily in the late fall; whereas the Tanaina capitalized on fall caribou hunts and fished all summer. Subsistence decisions could become complex when two or more resources were ready for harvest at the same time but in different places. On the other hand, resource levels fluctuated. When environmental changes combined with naturally occurring resource "crashes", whole territories might be vacated for long periods. Such threats to the resource base required prudent decisions by group leaders and a healthy social organization in order to maintain a viable society. These variances in human and animal populations, and decisions on resource harvest, provoke valid questions for archeological thematic studies on settlement patterns.

The specific seasonal cycle of Athabaskans surrounding DENA is depicted in greater detail in Appendix C. The following sections illustrate some of the general characteristics of the material culture, religion, and social organization common to all interior Athabaskans.
Figure 7. Seasonal Movements of Athabaskan Groups around DENA.
A hunter or craftsperson's skill was complemented by the items that s/he manufactured. A few materials, such as copper, were obtained through trade, but most of the necessary resources came from within the immediate environment. The process was cyclic, yet paradoxical—large game animals provided the main sustenance for survival, but many implements necessary to obtain them were made from the animals themselves.

**Manufactured Implements.** Implements and tools used in daily life were fashioned from the available resources. They were light weight out of necessity and could frequently be repaired on the spot with materials at hand. Common ingredients in the implements were combinations of bone, antler, horn, stone, wood, bark, roots, pitch, feathers, and nearly all the parts of animals and fish.

Ropes, lines, thread, and twine were basic items made of materials from large game animals and plants. Sinew, from the hind legs of caribou, was used for a multitude of purposes—sewing, snares, and lashings. It was used singly or braided. Skin lines (babiche) were cut in a spiral fashion from partially tanned hides of large game and then stretched between two trees. Lines also served many purposes, including snares for larger game (Osgood 1966:78).

Spruce root rope and twine were especially useful for binding objects that came in contact with water. Knots tied with spruce roots would not loosen as readily as skin line knots. Roots were used whole, split or braided. Fine lashings and basketry required split roots; fish trap tie-downs required the extra strength of braided roots (Osgood 1966:79).

Fishing implements were fashioned from many kinds of wood and plant products. Fish spears had spruce wood shafts with detachable bone or antler points or barbs attached to skin or sinew lines. Many different materials went into making fish traps and fences, which could be of various designs. The fish trap was of alder or small saplings bound with spruce roots; skin lines secured the trap to the shore; rocks were used as weights; wooden poles served a variety of purposes. Fish nets were fabricated from twisted willow strips while drag nets were made of alder poles and roots. The netted basket of the dipnet was from one to four feet in diameter and made from spruce root or willow attached to a spruce handle (Hosley 1966:104; Osgood 1966:83,99,100,101).

Large and small game were taken with a variety of creative snares, pitfalls, and deadfalls. A hare snare, set along trails, was supported by a pole in a notched stick (or flexed sapling) that sprang up and strangled the animal when triggered. A larger snare of the same design, for lynx and land otters, was set in a small, baited, brush trap house. Deadfalls were built near an animal's hole with one or more logs balanced above a flat surface (often a rock), with the trigger-pin obscured. Sometimes stone
slabs channeled the animal to the desired spot. Deadfalls could also be set inside baited brush trap houses similar to those used with snares. Extra heavy deadfalls were devised for bears. Pitfalls were dug for either large or small animals, but little detail is available (Osgood 1966:92-98).

The bow and spear remained common hunting equipment for the Koyukon and Upper Kuskokwim Indians (and perhaps the Lower Tanana) past the turn of the century. The bow was made from birch or the heart section of spruce, the bow string of twisted sinew. Arrows were of lighter weight spruce or birch wood fletched with feathers (often eagle), and fitted with stone or bone tips. They were of various lengths depending upon the game hunted. Arrow tips also varied; blunt tips were often used for small game and birds. The wooden hunting spear was three to eight feet long depending upon the amount of brush to be encountered. It was efficacious to have long spears when hunting bears (Osgood 1966:87-88).

Knives and other cutting tools were made in a variety of forms and used for many purposes. Women used semilunate-shaped slate knives in different sizes, with wood or bone handles; hide fleshers were fashioned from caribou or moose tibia. Men used knives of stone with handles wrapped with spruce roots, or chipped stone pieces bound to the inside of split caribou rib or leg bones. A rich man might own a small copper knife. Adze (not axe) blades were of hard stone fastened with skin lines to a wooden handle. Beaver teeth or chipped stone made good scrapers for wood or skins. Woodworking awls might be constructed from hafted beaver or porcupine teeth, or a sharpened bear bone. Bear or caribou bone supplied vital sewing needles and awls (Osgood 1966:102,103).

**Transportation.** The birchbark canoe was a prominent feature of Northern Athabaskan technology. It was usually constructed in the spring when bark was easily removed from trees. The spruce wood frame was covered with birchbark (with a single piece forming the bottom). It was sewn with roots from the spruce tree, and sealed with spruce pitch. The smaller hunting canoes were light weight (40-50 lbs.) and very portable. Larger canoes freighted heavier loads. Single-bladed paddles were used (Hosley 1966:99; 1981:537).

Skin-covered boats (bull boats) were a temporary conveyance used to transport game after fall hunting. Moose or caribou skins were placed (with fur inward) around a rough spruce frame and were generally circular in shape (Hosley 1981b:537; Osgood 1966:70). Square-shaped rafts were sometimes constructed for stream crossings or in emergencies such as floods. Two to four logs with cross pieces were lashed together by spruce roots. They were pushed along with long poles (Esau 1988:9; Osgood 1966:70).

Two types of snowshoes were generally used to support a person's weight on snow. One was long-tailed with a rounded and slightly raised tip used for traveling over fresh
snow. A smaller type had a sharply upturned, pointed toe and was best used on broken trails or old snow. Both were made of birch and laced with babiche (Hosley 1981b:537; Osgood 1966:71).

The concept of dog traction (dogs harnessed to a sled) was introduced to Alaskan Athabaskans by the Russians (Hosley 1981:537). Before that, two or three dogs per family were kept as pets and to aid in packing and hunting. Double-ended skin toboggans or sleds were used to carry heavy loads and were pulled or pushed by hand. They were up to eight feet long and two to three feet wide with upright rails on both sides. Smaller sleds of the same design were pulled by women (Hosley 1966:96; 1981b:537). Packs, of different designs, were carried by humans and dogs.

**Shelter.** Shelter types varied with the season and permanency of the settlement. Summer dwellings were less substantial than winter, sometimes consisting of a brush lean-to with a bark roof. Double lean-tos, facing each other with a hearth between, economized on firewood. Usually a rectangular hut was constructed of sheets of bark around vertical poles. The roof could be either flat or peaked. Above treeline, portable skin-covered, tepee-style huts were often used. Willow poles supported a structure that was up to ten feet in diameter. Two hearths (one inside and one outside) were common in summer shelters (Hosley 1966:101,133; 1981b:538-539).

The most permanent winter dwelling consisted of a pole framework covered with layers of soil and moss, buried a few feet into the ground. Sometimes a protected entryway was attached. A moveable board might be placed at the smokehole to act as a wind deflector (Joseph ANLC: tape 8, p.7). A dome-shaped circular dwelling covered with skins over a willow/spruce frame (sometimes dug slightly into the ground) was another style of portable dwelling used during nomadic hunts in late winter. Other dome shelters might be covered with sewn birchbark layers, sealed with pitch and banked with earth or snow (Hosley 1966:90; 1981b:539; VanStone 1974:36).

**Clothing.** The subarctic climate necessitated carefully tailored clothing. Garments were made from the skins of caribou, moose, sheep, furbearers, and sometimes bird or salmon skins. The fur was left on for winter clothes; otherwise it was removed. Skins were tanned and frequently smoked. Grass was used for insulation in moccasins. A set of clothes lasted only one or two seasons. Both men and women wore essentially the same style: long-sleeved shirt with pointed bottom in front and rear (for men) or straight and longer (for women), one-piece trousers with moccasins, socks, mittens, hat or hood, and fur parka (for winter). In the summer knee-high moccasins replaced trousers. Clothes were adorned with fringe, dyed porcupine quills, dentalia shells, or fur. The Tanaina (and perhaps others) made long squirrel skin coats that opened down the front and served as blankets at night (Hosley 1966:106; 1981:539; Osgood 1966:49).
Religion and Beliefs

Traditional northern Athabaskan religion consisted of a system of beliefs composed of spirits, near-spirits, and mythology. All natural objects were thought to possess spirits. There was only one religious practitioner—the shaman, who along with his special religious practices, was an important feature in the quest to control the spirits. However, an individual could also contribute to spirit control through a variety of personal rituals. The individualized character of the religion meant a person could select from among many beliefs and practices to suit his purpose. This resulted in a belief system that was characteristic of a group in general, but not necessarily of any individual (VanStone 1974:59,62,66).

Athabaskans viewed themselves as existing cooperatively with the animals upon whom they depended. The hunter deemed his skill less important than his ability to maintain a respectful relationship with the animal world because the latter resulted in the animals' willingness to be killed. Without that willingness, a hunter could not be successful (Hosley 1966:136). Spirits controlled the world, but fortunately there was an intricate system for dealing with them. Reasons were sought for all unexplained happenings. Life was filled with restrictions, protective practices, and omens that needed attention if one was to meet the challenges of the spirits. Spirits could be good, bad, or impersonal, such as those of fire or rivers (A. Clark 1981:593; Hosley 1966:136).

There was the belief that all animals were like men at one time and spoke one language. Then over time, only a few animals like the owl and jay were left to communicate with men. But animals continued to communicate with each other before and after death. So if animals were not treated with respect by hunters, they could become offended and tell the other animals. These animals in turn would refuse to allow themselves to be killed. Prescribed behavior, such as apologizing to an animal for having killed it, plus special treatment to the bones and head were meant to placate the animal and ensure continued hunting success. Nearly all furbearers and especially bears were treated with particular caution (Hosley 1966:119-122). Hunters would not speak of an impending hunting trip or use the animal's name except by circumlocution for fear the animal would hear. Mountain language was used in place of customary speech when hunting in the hills; a special way of speaking replaced certain taboo words, and prescribed behavior controlled actions (A. Clark 1981:593; Kari and Fall 1987:135).

There were many supernatural beings. One, the "Bush, Brush or Woods man" lived in the forest in the summer and stole children. Parents used his name to admonish children and keep them close to camp. Giants were responsible for creating geological formations and also killed people. But there were also creatures lacking supernatural powers who were generally harmless. These included the "Hairy man" (similar to a sasquatch but not to be confused with "Brush man") and "Big fish" who bit the bottom out of boats and attacked the color red (Townsend 1981:635; VanStone 1974:63).
Mythological stories frequently included the exploits of Raven, the trickster. Other myths explained how things came to be, such as the creation of the world, or exaggerated historical events, like migrations or wars. Cultural heros, often possessing magical power, were also described in myths (VanStone 1974:61).

Shamans were very important in Athabaskan life. Either sex could become one. They were believed to possess special spiritual powers (often inherited) which were always obtained through dreams. These powers were used to cure illness, ward off evil, find lost objects, predict events, cause death, interpret people’s dreams, and give or take luck in war, love, or hunting. The call to become a shaman could not be refused even though it may not have been sought. A shaman could be either "bad" or "good". Whether successful or not, a fee was usually charged for services (A. Clark 1981:593; McKennan 1981:574).

A shaman was taught a skill or magic song by his power-giving spirit in a dream. He eventually acquired several spiritual helpers who could be called upon to help in performances and cures. His power was derived from his ability to converse with the spirit world while in a trance. Then with the help of one of his guardian spirits, he would discover the evil spirit causing a person’s illness. Afterwards he sucked or blew the evil spirit or object from the patient. He used special drums and rattles to accompany himself while singing. The symbol of a shaman’s magical powers was the pouch that he wore on his body. In it were objects believed to carry medicinal properties which had been collected as a result of his dreams. Small dolls, amulets, and perhaps a wooden mask were also part of a shaman’s kit (de Laguna and McClellan 1981:661; Townsend 1981:634; VanStone 1974:67).

Unlucky hunters were "cured" in a fashion similar to sick people because bad luck was believed to be caused by evil spirits. Hunting luck could also be stolen from others by singing certain songs. Songs could cause death or illness among enemies too. Slight-of-hand tricks preceded face to face battles with other shamans when they pitted their powers against one another. The contest could be a "draw", which had been previously arranged, or if one man proved the stronger, the loser weakened and died, unless a relative was forfeited in his place (Hosley 1966:123-124; Townsend 1918:634).

Social and Political Organization

Athabaskans determined their descent through the mother’s line. In each society there were traditionally over a dozen (but never less than three) separate (exogamous) matrilineal clans divided into sides (moieties). Clan association determined marriage partners, hunting/fishing territory, who one talked to, avoided, helped in a crisis, and invited to potlatches. Clan descent carried an advantage that went beyond territorial and linguistic boundaries. A person could ask for help from a fellow clansman wherever he traveled, even from someone of a different language group (de Laguna and
McClellan 1981:653; Reckord 1983:38; Townsend 1981:631). It was imperative when first meeting unfamiliar people to immediately determine any common clan relationships.

A person was born into the clan of his mother. Upon marriage, which was always with a person of a different clan, membership did not change; neither did adoption alter a person's clan identity. While most people claimed identity to only one clan, there was one descent group where clan members claimed an intermediate and somewhat vague relationship with the others. These "People in the Middle" (or "almost a cousin to us all") enjoyed a degree of informality with those clans that could not exist otherwise. Normally, clan members guarded against offending the opposite clan, especially during potlatch speeches, but "Middle People" did not fear reprisal because they were related to everyone (George 1988:24; Hosley 1966:108-109; McKennan 1981:572).

Sharing, as promoted through teachings and clan responsibilities, was an essential component for group survival; it also cemented relationships that were needed to cooperatively harvest resources. Sharing resources, and trading and defense alliances often tied villages or groups together, which proved especially important during times of hardship (Reckord 1983:38-39).

When two people married, the union carried a network of obligations between the united clans. After marriage, a woman usually remained near her group or village of birth. The husband was apt to find his own clan members there too because he had most likely married into a group containing cross-cousins. Formalized trading partnerships were often formed between cross-cousins, who were probably also brothers-in-law. A trading partner association carried prescribed rights and duties which were designed not only for the good of the group, but enhanced a man's wealth and prestige (Reckord 1983:38-39).

A couple was not obliged to remain with the wife's group. In societies where large game hunting was the focus of subsistence activities, couples often returned to the man's group or village where he would not only be close to his mother, but would set up a hunting and trapping relationship with his brothers. Although a woman might not like leaving her family to live in the home of her mother-in-law, brothers often returned home with brides who were sisters in order to ease the situation. A man returning to his village stood a better chance of gaining power and prestige than if he remained with his wife's group. But residential flexibility was also an effective way to cope with a changing environment over which there was little control (Reckord 1983:39).

The variation in distribution of animal resources around DENA was responsible, in part, for regional differences in social organization. Wherever salmon constituted a major subsistence resource, villages tended to be larger (50-100) and exhibited a strong matrilineal and matrilocality force. But where large game hunting was the dominant activity, smaller villages (25-50), although still matrilineal in structure, tended to
organize their activities around patrilocal groups of male siblings (Reckord 1983:32). Examples of the latter are to be found among the Western Ahtna, Upper Kuskokwim, and Koyukon.

Chiefs did not exist in Alaskan Athabaskan societies in the same way they did among some Indian groups in the continental United States. The larger, more settled, salmon-based villages had powerful, respected headmen who saw to the well-being of the members and directed the major subsistence activities. These men were often given the designation Chief by Russian and American administrators and were asked to speak on behalf of their group; they did not, however, hold absolute power over their group. Policy-making decisions usually reflected the consensus of all adult males in a group. Smaller, hunting-based groups were often organized around a man (or men) who possessed leadership and orator skills, was generous, a good hunter, showed good judgement, and, frequently, was a shaman. A man with these qualities was undoubtedly also rich in terms of the quantity and quality of his available resources.

A rich man among small hunting groups might take the responsibility of organizing caribou drives and maintaining the fences. He would see to the redistribution of the resources, making sure the elderly, infirm, and orphans were cared for. His opinion was sought, especially if he was a shaman. He might dictate the direction of the next hunt, particularly if hunting had been poor. Generosity was the hallmark of any rich man. He would be expected to hold potlatches, thereby increasing his status. But a rich man's position was primarily economic; when he could no longer provide for others, or lost his shamanistic powers, he was replaced or people joined another group (de Laguna and McClellan 1981:656; Townsend 1918:631; VanStone 1974:48).

Athabaskans coalesced or dispersed seasonally to conduct their subsistence activities as the resource and environment dictated. Large or small groups, called bands, exploited a certain territory. Bands were composed of related people from different clans. Band membership was fluid, with membership changing, either seasonally or permanently, for any number of reasons, such as resource activities that might require cooperative endeavors; interpersonal hostilities; or depleted resources that might necessitate dispersal. Band population was generally small, consisting of nuclear families who spent some of each year scattered in small units throughout the territory. These family units regrouped as a local band at various times for specific hunting or fishing tasks. A larger unit or regional band, consisting of several bands numbering at most a few hundred people, might gather for major events, such as the fall caribou migration, or a large potlatch. If a name was attached to a local or regional band, it was usually done so by other groups, and usually without meaning to the band in question. Frequently a name was derived from a particular geographic feature of the territory, such as a lake or drainage (VanStone 1974:44-45).

Potlatch. The potlatch is an important institution in Athabaskan society in which an event in a person's life is honored. It is a formal occasion given for cross-relatives
and opposite clan members of the person being potlatched. A person never hosts a potlatch for himself; however, he will greatly increase his prestige within his group by giving a potlatch for someone else. The most notable feature of the potlatch is the distribution of numerous and costly gifts to the invited guests, which leaves the host nearly destitute and in debt, but with increased status within the community because of his generosity. Other potlatch events include feasting, dancing, singing, riddling, games, eulogies, and speeches (A. Clark 1981:593; Guédon 1981:577).

The potlatch is given (not held) for a number of reasons: a boy's first kill or a girl's first collection of berries, remarriage, a girl's coming of age, compensation for an offense or injury to a member of the opposite clan, recovery or return of a person, payment of services, settlement of a disagreement, or for any reason such as the death of a favorite dog. The most compelling circumstance however, is death (Guédon 1981:578).

Several years may elapse before a person can marshall the resources to potlatch a dead relative. The celebration must be given not only to honor the dead, but to repay people of the opposite clan for handling the corpse. The potlatch functions as an outlet for grieving but ends with gaiety. A potlatch may be given by a man or a woman, or more than one person. A person can expect help in accumulating assets to potlatch a person of his own clan, but if he wishes to do so for a spouse or child, he may not get aid beyond that of his own family (Guédon 1981:578).

Potlatches were customarily held in late fall, a time when resources were plentiful, but they were also held in the late winter, or more commonly, at the winter solstice. Potlatching took more than just acquiring vast amounts of gifts and food. There were songs, games, riddles and dances to be newly composed, or old ones to be rehearsed; costumes and equipment had to be made or repaired. There was a great deal of planning that went into giving a potlatch, not the least of which was housing for guests who might double the village population. Finally, respected messengers were sent to invite guests, some from distant villages. Those who came the farthest were honored with speeches and gifts. Hosts were not the only ones that prepared for the celebration. High ranking guests needed to know the traditions of the host village in order to properly respond to local riddles or to the display of village heirlooms (de Laguna and McClellan 1918:660; Reckord 1983:38).

Athabaskans surrounding DENA conceivably could attend a potlatch anywhere within the Interior wherever their clan relationships permitted; but more often, groups attended potlatches in familiar villages within a certain radius. Upper Kuskokwim groups tended to potlatch with groups at Minchumina, Cos Jacket, Nenana, and Tanana, but not toward McGrath (Hosley 1966:152). Nenana groups potlatched with Minto people and groups farther up the Tanana River. A potlatch might last four days to a month. Besides the eating, dancing, gift-giving and games, rival shamans might test their powers against one another. The opulence displayed at the potlatches in recent times was likely the result of increased wealth from the fur trade economy and

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access to new trade items. Some of the goods given away this century at potlatches included bolts of cloth, rifles, axes, and huge piles of blankets. A potlatch in Cos Jacket in about 1914-1917 was reported to have lasted three months and cost over $7,000. Such wealth is probably not representative of aboriginal potlatches even though hosts stripped themselves and many relatives of everything they owned (Charlie 1988:109; Hosley 1966:152-153).

Potlatching gained the host prestige and power even though they ended in debt. It was the only way to gain status and a good reputation within the community. A person had to be rich in order to give a potlatch; but no matter how rich he was, he could not gain status without potlatching away his wealth. Honor was derived from the generosity exhibited by indebting oneself to his kinsmen. Potlatching was a system that balanced a person's desire for personal recognition against his need to cooperate within the society (Hosley 1966:134; Guédon 1981:578,581).

After the potlatch the hosts and spouses entered a 30-day period of ritual restrictions (similar to a girl at puberty) in order to ward off bad luck to which they were now vulnerable and to help regain their wealth.

**Life Cycle**

All Athabaskan societies shared similar cultural practices that marked life's major milestones of birth, puberty, marriage, and death. There were many precautions to be observed during one's lifetime. Through these actions a person might acquire health, long life, wealth, hunting luck, and remove contaminations that could drive away the game and fish. Also, proper deeds performed at critical times of life helped develop personal attributes deemed vital to the survival of the individual and the group (de Laguna and McClellan 1981:657). Each group may not have displayed all of the following characteristics, but they were representative of Alaskan Athabaskans in general.

**Birth.** Pregnant women were encouraged to work hard, eat less and not eat new foods. There were many restrictions particularly against eating fresh meat. Both parents avoided freshly killed game after the birth, and the father did not hunt for one month (A. Clark 1981:590; Esau 1988:19; John, M. 1988:41).

Birth usually took place in a specially built hut near the main dwelling with one or more older women in attendance. Food and drink were withheld from mother and child for a day or two. The mother was confined for about 30 days; some restrictions continued for another 40. The baby was carried in a birchbark sitting-cradle with a moss or squirrel nest diaper that had been smoked to remove insects (A. Clark 1981:590; de Laguna and McClellan 1981:657; Esau 1988:11; McKennan 1981:571,572).
Birth rates were high, but so was infant mortality; so family size remained small. Adoption was common. A child remained in the clan he was born into irrespective of his adoptive mother's clan (Townsend 1981:632).

**Childhood.** The propose of education was to develop competent hunters and hardworking, skilled wives. Girls were taught by their mother, but boys were often tutored by their mother's brother. Learning was largely through imitation. Cold, lack of food and other hardships were to be endured. Laziness, stinginess, stealing, lying, and arguing were not tolerated. Discipline was carried out through verbal (admonishments or threats of monsters) or physical means. Orphans, even though adopted by close relatives, lived an especially hard life and were often abused (de Laguna and McClellan 1981:661; Joseph ANLC:tape 8, p.4; Townsend 1981:632).

**Puberty.** Puberty was a critical time in the life of either sex. But girls were subjected to more severe restrictions than boys. A boy was called the "one in training", and a girl was the "hood-wearer" (de Laguna and McClellan 1981:658).

Boys' training was meant to produce endurance and dexterity (McKennan 1981:572). Early in the morning boys were sent out to run, jump over bushes and perform other tasks (Fall 1987:52). In some societies 15 year-old youths were sent into the woods alone for five days of fasting (Townsend 1981:633). Even the physically handicapped were expected to do what they could in the form of chores, such as chopping wood, in order to encourage productivity and independence (George 1988:17). A boy's first kill, no matter how small, was cause for celebration. The food was given to others, and the family and boy fasted for a few days. A similar ceremony, in the form of a potlatch, was conducted when the first large game was killed. (de Laguna and McClellan 1981:657; Joseph ANLC:tape 14, p.15).

A girl was secluded in a special hut at the onset of her first menstruation. She remained in the hut, which was sometimes a mile from her family. After a month she might move to another hut closer to the village. The distance and the length of time in seclusion was sometimes in direct proportion to the family's status within the community (Cruikshank 1975:3).

A younger sister might keep the menstruant company. Older women supplied food (never fresh) and instructed her in skills (especially sewing) and behavior befitting a woman. She was subject to fasting for the first several days and sat with knees bent and head bowed (de Laguna and McClellan 1981:657). Numerous restrictions were placed upon the girl. She drank through a bird bone straw, scratched herself only with a stick, ate only certain dried foods from special dishes, and could not make fire (Joseph ANLC:tape 13, p.20). Most characteristic of the restrictions was a hooded garment that prevented the girl from seeing anything but the ground at her feet. Attached to the hood were caribou hoof rattles which warned others of her presence when she left the hut because her presence and gaze were dangerous to men's hunting
luck (de Laguna and McClellan 1981:657). She could not walk on a game trail or break trail. When the camp moved, she followed behind, often led by her mother at the end of a stick because her hood limited her sight. At the end of her seclusion a girl was considered marriageable. Sometimes, her father would give a potlatch to announce her eligibility. At each menstruation, women isolated themselves in a separate hut. Throughout the childbearing years women were subject to various restrictions, most notable of which was the avoidance of anything to do with bears, even speaking their name. But at menopause, the restrictions ceased and women became "just like a man." (A. Clark 1981:591; Cruikshank 1975:2,3; de Laguna and McClellan 1981:658; McKennan 1981:572; Townsend 1981:633).

**Marriage.** A woman could marry shortly after her seclusion, but a man might not marry until he was 30 because it was deemed important that he give or participate in three potlatches. Partners were usually selected by parents. The most desirable partner was a cross-cousin—mother's brother's child or father's sister's child (A. Clark 1981:590). Parents considered not only the skills of the prospective in-law but the family's status within the community. Shamans or rich men could choose whomever they wished (A. Clark 1981:591). A man lived with and worked for his in-laws for about a year before actually consummating his marriage (de Laguna and McClellan 1981:658). Sometimes his bride was still in seclusion while he performed his bride service duties. The couple lived with the bride's parents or her band for about a year or until the birth of the first child (McKennan 1981:571; Townsend 1981:633). At any time however, the couple was free to reside where they wished. Polygyny (multiple wives) was allowed, and a man often married sisters. Some leaders took wives from many different clans for political reasons. A widow might be cared for by her husband's brother; frequently, she married him. However, life for a widow was customarily poor and cruel (Joseph ANLC: tape 8, p.5). Polyandry (multiple husbands) existed but probably only in times when warfare or disease decimated the population (A. Clark 1981:590).

**Death.** Death brought not only sorrow to the grieving family but fear of contamination from the corpse and ghosts. The dying person was removed from the main dwelling and placed in a small shelter. A corpse however, was removed through a window or smokehole, but never the door. It was forbidden to mention the name of the deceased. Children were sent away to relatives; the death was not explained to them (de Laguna and McClellan 1981:658).

The corpse was washed, clothed, and watched over for three days while its spirit still lingered. With proper precautions the spirit could be enticed to go to the land of dead and not return until reincarnated. The body was cremated with some of the deceased's possessions, although with prior consent, objects could be distributed to others. An alternative method of disposal was to wrap the body in caribou skins and place it on a scaffold between trees or cover it with logs at the base of a tree. An important person was cremated in his house and a new house would be built close by. The dwelling in
which any adult died might be burned with its contents, although this was not automatic. After cremation the ashes were either left alone, buried in a birchbark box, or kept by the deceased's children (A. Clark 1981:591; de Laguna and McClellan 1981:659; McKennan 1981:572; Townsend 1981:634; VanStone 1974:84).

The corpse was cared for by people of the opposite moiety. The handlers were then considered contaminated and had to endure various restrictions for ten days or more. After the funeral there was a series of feasts with a major potlatch occurring in a year, at the winter solstice. Part of the reason for the potlatch was to repay the people who had contaminated themselves by handling the corpse. A widow mourned for a year. She could remarry but usually asked the permission of her husband's brother to do so. Her children were often adopted out. A widow's life was one of misery; if appropriate grief was not displayed, a woman might be beaten (de Laguna and McClellan 1981:659).
Historical Overview

As previously noted, the DENA Historic Resource Study (Brown 1990) will soon be available, thus the summary provided here will be brief. In addition to the draft of the Historic Resource Study, key sources from which this review was prepared are Brown 1983, Buntzen 1978, Hunt 1989, Kauffman 1954, Naske 1986, Pearson 1953, Schneider 1986, and Schneider et al. 1984.

Early Explorers in the Central Interior

Russian exploration of Alaska began with Vitus Bering's voyages to the Aleutians and Prince William Sound in 1741. For more than a century afterwards, the Russians were engaged in expanding the profitable Siberian fur trade into Alaska, starting first with the coasts of the Aleutian Islands and working eastward, eventually reaching inland along major rivers. For the most part, however, the Russians limited their interest to the fur-rich coastal regions of southeast, southcentral and western Alaska and the Yukon and Kuskokwim Rivers, expending little in the way of energy or resources on general exploration of the Interior.

Although no major trade outposts were located in the immediate vicinity of DENA, considerable activity did occur along adjacent waterways such as the Kuskokwim River, the Susitna River, and the confluence of the Yukon and Tanana rivers. As in other regions, the appearance of a cash market for furs almost certainly brought rapid and far-reaching changes in native territory and settlement.

The earliest written references to the DENA area were made from a distance by explorers such as George Vancouver in 1794, Baron Ferdinand von Wrangell of the Russian-American Company in 1839, and William H. Dall in 1867, all of whom noted the mountain we know today as Mt. McKinley. The director of an engineering survey party for Western Union Telegraph, Dall proposed that the mountain group be named the Alaska Range (Pearson 1953).

By the late 1880s a few early prospectors, explorers, and traders were beginning to make inroads into the Interior. One prospector, Frank Densmore, recognized and wrote of Denali's magnificent stature in 1889 while on an exploratory trek from the Tanana to the Kuskokwim River, via Lake Minchumina. The glowing descriptions of prospector W. A. Dickey in 1896 spread awareness of the mountain's grandeur and immense size. Dickey is also credited with naming the mountain.

With the advent of the Klondike gold rush in 1896, the United States Government was forced into a more active role in Alaska. By 1898, Congress charged the United States Geological Survey with the responsibility of providing the maps and transportation information needed by prospectors. As a result, several government-sponsored agencies
began surveys and explorations in the DENA region. These included the exploration, by George Eldridge and Robert Muldrow, of the United States Geological Survey of the southern flank of Mt. McKinley in 1898. Also in 1898, Sergeant William Yanert of the United States Army crossed from the Susitna River to the Tanana River, via the Nenana River, and may have been the first white man to enter the area known today as Denali National Park and Preserve (Brown 1990; Pearson 1953).

The first extensive exploration of DENA occurred during a 1902 United States Geological Survey expedition led by Alfred H. Brooks. Brooks and seven men travelled over 800 miles along a route that took them from Tyonek, up the Susitna River, through the Alaska Range, and along the northern side of Mt. McKinley. From McKinley they travelled across the central Interior via the Nenana and Tanana Rivers, arriving at Rampart on the Yukon River more than five months after they started. The data gathered during their expedition is still used today.

Adventurers and Mountaineers

As news of the grandeur of Mount McKinley began to spread, so did the interest that adventurers had in conquering such a dramatic peak. Noted explorer Frederick Cook made one of the earliest attempts to climb Mount McKinley in 1903. During a three-month-long expedition, Cook circled the base of the mountain, explored previously unknown parts of the mountain and located a pass northeast of the Muldrow Glacier; but he was not successful in his attempt to reach the summit. Cook tried again in 1906, but his claim of a successful climb was later disproven (Brown 1990; Hunt 1990).

Climbing partners Belmore Browne and Herschel Parker were also important in McKinley climbing history. They supplied some of the evidence that eventually disproved Cook's claims of having reached the summit. Browne and Parker attempted multiple expeditions (sometimes known as the Parker-Browne expeditions) between 1906 and 1912, with the intent of settling the Cook question. None of the Browne-Parker expeditions reached the summit. During the last attempt the climbers came remarkably close, only to be turned back by suddenly deteriorating weather (Brown 1990).

Perhaps the most spectacular attempt to scale Mt. McKinley was made by a group of hardy Kantishna miners. The Sourdough expedition, as it has come to be known, consisted of Tom Lloyd, Charley McGonagall, Billy Taylor, and Pete Anderson. The group found enthusiastic support in Fairbanks from others eager to see the mountain conquered by local residents. The climbing party was able to stay together for days, but first Lloyd, and then McGonagall quit. Taylor and Anderson kept on. For the final assault, the two set out from their last base camp under perfect weather conditions. Hauling a 14-foot long spruce flag pole to mark the summit, hot chocolate and a bag of
doughnuts for provisions, the round trip, from final base camp to summit, took 18 hours. Judging that the mountain's two peaks were about the same height, the climbers decided to erect the flag pole on the more northern of the two, which they assumed would be more visible in Fairbanks. Unfortunately the southern peak was later determined to be several hundred feet higher and as a result, history does not credit the Kantishna sourdoughs with the first successful ascent (Brown 1990; Hunt 1990).

The first successful expedition to reach the summit of Mount McKinley was led by Harry Karstens, a skilled explorer who would later become DENA's first Superintendent, and Hudson Stuck, an Episcopal Archdeacon originally from England. In 1913, Karstens and Stuck, together with Walter Harper, son of explorer Arthur Harper, and Robert Tatum, a theology student, had a complex climb. After experiencing the destruction by fire of supplies, extreme cold, and altitude sickness, the party, led by Harper, struggled on to become the first to reach the south peak, the mountain's highest elevation. The climbing party also saw the flag pole atop the north peak, confirming the earlier ascent by the Sourdough expedition. One of the base camps used by the expedition has recently been located and recorded as an historic site (MMK-094).

Prospecting and the Kantishna Gold Rush

James Wickersham, a prominent judge and political figure, also made an attempt to reach the summit of Mount McKinley. While Wickersham's 1903 expedition did not reach the summit of the mountain, members of the party discovered gold in the Kantishna Hills, precipitating the short-lived but vigorous Kantishna Rush of 1905-06. As word spread of the gold discovery in the Kantishna Hills, a small number of early prospectors (Joe Dalton and his partner Regan, Joe Quigley and Jack Horn) trickled into the area, finding gold along the Toklat River and then on Glacier Creek. News of their success spread rapidly and by the summer of 1905, the Kantishna Gold Rush was on.

Access into, and out of, the Kantishna area was difficult. Prospectors and freight travelled by river part of the way but then had to travel overland across tundra that was virtually impassable except when frozen. The Kantishna and Bearpaw rivers were major transportation corridors. Boom towns with names like Diamond, Glacier City (Plate 2), and Roosevelt appeared overnight. The transient tent community of Eureka, located on Moose Creek, was the center of activity during that first summer of 1905.

The rush reached its peak quickly as the shallow, more easily-worked placer deposits were exhausted. During the 1906 season, the Kantishna District produced $175,000 (3,600 ounces) in placer gold; by 1907, that amount had fallen to $15,000 per year. Miners began leaving the area in the spring of 1906 and by late summer most of the boom towns were empty. Still, a small number of miners, generally those who had
Plate 2. Glacier City: above, as the recorder’s home and office appeared in 1919 (Stephen Foster Collection, Archives, University of Alaska Fairbanks); and below, as one building looked in 1987.
staked the best claims, remained in the area. Gold production fluctuated during the next several years, ranging from $5,000 in 1909 to a high of $30,000 in 1918. Small amounts of silver were also mined in the Kantishna area.

By 1915, small-scale hydraulic mines were operating in the district. By 1922, The McKinley Gold Placers Inc. (on Lower Caribou Creek) and The Kantishna Hydraulic Mining Company (on Moose Creek) began larger hydraulic operations. These companies constructed impressive ditch, dam and flume systems, several of which have been recorded as cultural sites in DENA.

Kantishna miners did not restrict their efforts to placer mining for gold. Some engaged in hard rock or lode mining. Other minerals were also mined, including high grade antimony, silver, and lead-copper-zinc deposits were successfully mined in later years. Of this effort the Stampede antimony mine was the most successful; production began in 1936, and by 1941 the Stampede mine was the largest antimony producer in the state (Bundtzen 1978).

World War II had a dramatic effect on mining in the region. The Federal War Production Board closed all gold mining and other operations that were not deemed essential to the war effort. Production of antimony continued throughout the war because it was a strategic war material. Gold mining resumed after the war with production levels fluctuating according to market conditions (DENA mining EA nd:47).

Transportation

The Alaska Road Commission

The Board of Road Commissioners for Alaska was organized in 1905 in response to increasing demand, by both the Government and private sector, for improved transportation in Alaska. The agency, which later became the Alaska Road Commission (ARC), had a complex history, having been under the authority of both the War Department and the Department of the Interior before finally being absorbed by Department of Commerce in 1956 (Naske 1986).

The ARC's first priority was to make the existing Valdez-Fairbanks trail, forerunner of the Richardson Highway, suitable for wagon travel. It was anticipated that once the trail was completed, economic development would warrant construction of a railroad that would reach from Valdez to Nome, via Fairbanks (Brown 1983:692). Efforts were eventually expanded to other trail systems, such as the loosely-defined Iditarod Trail, which connected Seward, Rainy Pass, McGrath and Nome (Schneider et al. 1984:20). In addition to building and upgrading roads and trails, the ARC also constructed bridges, cable crossings and eventually, airfields. Examples include a three-span bridge
over the Kahiltna River built in 1910-1911, and a 1920s cable tramway system along the Cache Creek trail that crossed the terminus of the Kahiltna glacier and several creeks (Bacon 1982:12). As construction of the railroad began, the ARC attempted to attract traffic to the railroad by constructing feeder roads and trails.

The ARC often used aboriginal trail systems (Naske 1986:1). Trails were marked with tripods built of wooden spruce poles. Roadhouses and shelter cabins were also constructed, usually at 20-mile intervals. Many of the roadhouses were equipped to accommodate dog teams, supplying dog houses and dog food (Greiser et al. 1985:3-70).

Most of the best-known trails in the vicinity of the park were winter trails. These included the trails that connected Kantishna with the railroad at Nenana and Kobe via the communities of Diamond and Glacier. Although not well documented in DENA, the ARC was active within present park boundaries and several reported sites are thought to date to ARC activities (Pearson 1953:32-33; Evans 1987).

Encouraged by the high grade ores that were discovered during the 1920s, the ARC considered a road into the Kantishna Hills a priority (Browne 1921). After considering several options, the ARC selected the "Riley Creek" route that exists today as the Denali park road. This route was selected because it offered the most direct access to the best mineral deposits, was expected to be easier and cheaper to build, and also would encourage tourists to visit the park (Brown 1921, Sterling 1946). Completion of the road took many years. Construction began in 1923 and extended to the northwest park boundary by 1932. The final stretch of road, into Kantishna, was not completed until the late 1930s (Evans 1987:243-244).

The Alaska Railroad

After more than a decade of lobbying Congress, Alaska's businessmen and entrepreneurs were successful in obtaining government support for a railroad system in the Interior. This support was offered only when it became apparent that the best way to foster economic growth and productivity in the region was to develop a more dependable transportation system. Once legislation was passed in 1914, the Department of the Interior and the newly appointed Alaskan Engineering Commission (AEC) began survey work on the Seward to Fairbanks railroad the following summer. The AEC began working south to north, concentrating on the Seward to Anchorage route first (Greiser et al. 1985:3-72). The base of operations for the construction was to be at the mouth of Ship Creek, along Knik Arm. The settlement of Anchorage quickly grew up around the railroad construction boom (Wilson 1989).

Actual construction of the railroad proved to be an immense undertaking. Construction began in 1915, using equipment salvaged from the Panama Canal project and crews that numbered as high as 4,500 men at the peak of the project. By 1918, the railroad
was growing from two directions; northward along the Susitna River Valley and southward from Nenana. Progress was slow however, due to the challenging environment, climate and topography of the Interior and a manpower shortage generated by World War I. Four years into construction the project was still incomplete and the original budget exhausted. After two additional Congressional appropriations, the construction was formally completed in 1923 and celebrated with the well-known "golden spike" ceremony near Nenana (Greiser et al. 1985:3-72).

Described as the first permanent resident of the park, Maurice Moreno established a roadhouse in the McKinley Park Station area in the early days of railroad construction. Lodging, meals, and supplies were available to railroad and Alaska Road Commission workers, travellers and early tourists. A second, more elaborate facility, was built in 1923 at a nearby location (Pearson 1953:37). Moreno's gravesite (DENA-81-005), and the remains of his roadhouse (HEA-059), have been recorded as cultural sites.

With the railroad completed, the Susitna River Valley became the primary transportation route into the Interior. Perhaps more than any other factor, the railroad influenced historic settlement patterns and brought far-reaching change to the region. Many of the construction camps and stations that developed along with the railroad, such as Anchorage and Talkeetna, are still in existence today.

River Transportation

Prior to the completion of the railroad and the onset of regular air transportation, river travel was a key element in entering and supplying the Interior. When frozen, rivers were effective trails upon which dog teams could travel. Between break-up and freeze-up, canoes, poling boats and steamers travelling between far-flung communities and supply points were an alternative to overland routes through waterlogged tundra and dense brush. Most of the miners eager to reach the Kantishna district travelled by river steamer from Fairbanks along the Tanana River to Roosevelt (on the Kantishna River) or Diamond (on the Bearpaw River). After disembarking, travel continued overland to Glacier City at the mouth of Glacier Creek, and then on to the Kantishna Hills. Many Kantishna miners used the tent community of Eureka, known today as Kantishna, as the base camp from which they then departed to various claims and camps.

During the fall of 1905 river steamers were servicing the communities of Roosevelt and Diamond (Bundtzen 1978:152). Both communities began as steamboat landings and supply points. The steamer routes were plagued by shallow and seasonally fluctuating water, river bars or other navigation problems.

Canoe travellers could paddle to the Kuskokwim River from the Kantishna River making use of a portage at Lake Minchumina (Brown 1983:275; Schneider et al. 1984). This portage was used by native groups as well as prospectors and trappers (Schneider et al.
Early Aviation History

By the early 1920s, air travel had come to the Interior. The ARC kept up with changing transportation needs, broadening their responsibilities to include the construction and maintenance of airfields (Naske 1986:142-153).

One of the region's early aviators was Ben Eielson, who experimented with mail delivery by air as early as 1924, providing service between Fairbanks and McGrath (Naske 1986:142; Schneider et al. 1984:24; Schneider 1986:178). In June of 1924, Eielson piloted the first plane to land in the park, landing on the floodplain of the Thoroughfare River, near Copper Mountain. The mountain was renamed Mount Eielson after his death in a 1929 plane crash (Bundtzen 1978:155). Notable among other early flights was the first flight over the top of Mt. McKinley, made by Matt Neiman and his mechanic Cecil Higgins in 1930 (Pearson 1953:58).

The 1930s saw the development of aviation usage patterns that are common in the park today. The tourist industry was quick to incorporate air travel. In 1930, a landing strip was built on a gravel bar in the Savage River, near the tourist camp. Alaska Airways and other operators used the field during sightseeing trips to Mt. McKinley (Pearson 1953:58). In 1934, Sam White, described as "Alaska's first flying Game Warden", and Superintendent Liek used an airplane to make a sheep count (Pearson 1953:58). Miner Earl Pilgrim used aircraft to ship antimony ore from the Stampede Mine, although fluctuations in market conditions did not make this consistently cost-effective (Bundtzen 1978:159).

In 1944, an Army Transport C-47 airplane crashed into the southeast flank of Mt. McKinley at 12,000 feet elevation. An expedition was mounted to locate and retrieve the bodies of the 19 passengers and crew. Although the party was able to locate the site of the crash, no trace of the plane's occupants was ever found (Pearson 1953:50-51). Another crash involving 19 fatalities occurred in 1952, when an Air Force C-119 crashed approximately 12 miles from the 1944 crash site (Pearson 1953:55).

Like the railroad, the locations of airfields influenced the development of support services. During the early 1940s, McGrath, Farewell and Lake Minchumina all became regional aviation centers of sorts. The Farewell and Minchumina facilities were intermediary communication sites built by the Civil Aeronautics Authority (Bacon 1984:95; Schneider et al. 1984:24).
The Development of Denali National Park

Founded in 1917, Denali National Park is one of the older park units in the United States. Reasons for establishing the park were to stimulate travel to Alaska by tourists and sightseers, to promote tourist travel to the park, and to preserve the areas game and natural scenery (Kauffman 1954).

The game preservation cause was championed by the Boone and Crockett hunting club, led by member Charles Sheldon. Sheldon was a well-known and highly competent hunter with excellent skills in observation and description. As described by former park Superintendent Pearson:

Among the hunter-naturalists of America at that time, Charles Sheldon occupied a unique position. He was our most famous big game hunter. Choosing his hunting grounds in the most remote and inaccessible parts of the continent, possessed of physical strength and endurance beyond belief, of unbounded enthusiasm, of powers of observation second to none, and endowed with a conscience intolerant of exaggeration, the accounts of his hunts abound in vivid descriptions of localities not previously explored. His circumstantial studies of the habits of animals rank among some of the most valuable of the contributions made to the life histories of many species—particularly the mountain sheep, caribou, moose, grizzly bear and wolverine [Pearson 1953:16].

Sheldon's first trip into Kantishna was in 1906. Surveying the region's Dall sheep populations, he determined that the quantities of game being taken to feed the prospectors and large railroad construction crews were having a destructive effect. Upon returning to the east coast Sheldon enlisted the support of fellow Boone and Crockett members in convincing Congress the area was worthy of protection as a game refuge. He returned to the Denali area the following year for a longer (nearly year-long) stay, during which he continued his wildlife surveys and outlined the boundaries of the park that were eventually adopted.

It would take eleven years for Congress to pass the bill creating the park and another four years for the government to provide funding for it's development and management. In 1921 Harry Karstens, successful McKinley climber as well as guide and friend to Sheldon, would be appointed the first Superintendent of Denali National Park and Preserve. The first appropriation of $8,000 covered salaries for the superintendent and one ranger and general equipment (horses, harnesses, wagon, dog teams, sleigh).

Over the next few decades, DENA grew along with the prospering conservation and recreation movements. This expansion was fueled by increased recreational use of the park which created the need for new facilities. After a period of steady development, the Civilian Conservation Corps (CCC) embarked on a phase of intense construction in
DENA. Implemented by President Franklin Delano Roosevelt as an emergency work-relief program, the CCC played a major role in building and improving the park's physical infrastructure (buildings, sewer and water systems, ditches, roads), especially in the headquarters area. This has come to be considered the era in which the characteristically rustic physical appearance of the park, still evident today, evolved.

In summary, DENA has a fascinating and varied history. This history is illustrated by a wealth of historic sites with archeological potential, including campsites of early explorers; structures built during the park's inception, shelter cabins, camps, roads and trails built by the Alaska Road Commission, camps and features associated with the Alaska Railroad, camps, workings and communities associated with the Kantishna Gold Rush and other episodes of mining activity, pioneer graves, cabins built by Civilian Conservation Corps (CCC) during the Depression, and patrol and boundary cabins associated with early park operations. Less obvious but equally valuable historical archeological resources include roads, trails, airstrips, dumps, and campsites. Even the sites of airplane crashes on Mt. McKinley may be someday be considered historical sites with archeological potential.
Teklanika

Prehistoric archeological research in Denali began with the discovery of two important archeological sites by a geological field party near Teklanika campground. The sites, eventually designated Teklanika West (HEA-001) and Teklanika East (HEA-002), were later excavated by Dr. Frederick Hadleigh West, then of the University of Alaska-Fairbanks (West 1965). West's excavations commenced in 1961 (Contract 14-10-0434-810). Collections also exist for materials recovered during 1960 (during the initial discovery and recording of the sites), 1964, 1965, 1967 and 1968. The location and condition of these and other known Denali collections have been detailed in a report generated by an NPS curatorial contract (The Earth Technology Corporation 1984). The location of collections has been included in Table 3, Appendix A.

The results of the Teklanika excavations indicated that the sites, narrowly separated by the Denali Park Road, are the remains of ridge-top game lookouts represented by shallow, single occupation zones. For analytical purposes, West chose to treat the collected materials from both sites as one assemblage. Among the lithic tools recovered (Appendix D) were implements that West considered to be "essential elements" of the Teklanika collections. These consisted of:

1. Core and blade technology, including wedge-shaped or Campus type microcores, tabular microcores and prismatic blades;
2. Leaf-shaped knives;
3. Burins;
4. Small end scrapers on prismatic blades;
5. Boulder chip scrapers;
6. End scrapers on triangular, flat-topped and keeled flakes;
7. Small unifacial, spatulate projectile points.

West's interpretation of the Teklanika sites, based on similarities with several other early tool assemblages, suggested dates from between 8,000 to 10,000 BC (10,000 to 12,000 BP), making the Teklanika sites among the earliest in the region (West
1965:62-74). This interpretation was eventually challenged, when a grouping of radiocarbon samples collected during the Teklanika excavations indicated a more recent (3,500 to 3,800 BP) occupation (West 1975:79). West has continued to support his original assessment of the site's age, claiming the dates were from a paleosol (a buried soil surface) that overlaid the cultural deposit (West 1975).

West eventually incorporated the Teklanika sites into his landmark attempt to more clearly define early core and blade assemblages in Central Alaska (West 1967). The Denali complex, as West labeled the assemblages, has become a cornerstone of early prehistoric chronology in Alaska's Interior, although many researchers dispute the proposed early age of all Denali complex sites, citing much later radiocarbon dates from Teklanika as well as other Denali complex sites (Mobley 1985; West 1975).

Morgan's 1963 Survey

The first planned archeological survey of the park was conducted in 1963 by H. Morris Morgan, a geographer from the University of Alaska-Fairbanks (Contract 14-10-0434-951). The survey followed West's excavations at Teklanika and attempted "...to locate additional sites in order to lay the ground work for continuing evaluation of the park's archeological resources" (Morgan 1965:3). By modern archeological research standards, the investigation would be considered a reconnaissance or preliminary survey, designed to help plan more intensive investigations. The survey achieved sporadic ground coverage, generally focusing on selected high ground areas along the park road corridor area. Morgan was successful in locating 11 previously unknown prehistoric sites, all associated with exposed high ground areas (HEA-148, HEA-149, HEA-150, HEA-151, HEA-152, HEA-153, HEA-154, HEA-155, HEA-156, HEA-157, HEA-158). One site, Sheep Pass (HEA-148), was characterized as a heavily exploited lithic material quarry site. Based on the results of the survey, Morgan reported that no additional archeological surveys were required in the park (1965:10). As the survey report provides only minimal documentation of the investigation and sites and virtually no discussion of survey methodology, it is difficult to interpret the survey results. Possibly the best use of Morgan's data is as an indication of the potential resources in the park.

Treganza's 1964 Survey

Additional archeological survey was conducted during the summer of 1964 (Treganza 1964). The survey (Contract 14-01-0434-1547) was intended to supplement previous archeological research in the park. Treganza, the lead researcher for the project, was not extensively familiar with Alaskan archeology and entered the field without detailed knowledge of the previous research projects. Primarily, the surveyors were concerned with relocating Morgan's (1964) sites and then "...expanding into regions which looked promising" (Treganza 1964:6). Treganza located five previously unknown
prehistoric archeological sites (HEA-159, HEA-160, HEA-161, HEA-162, HEA-163), bringing the total number of known sites in the park to 18. As with Morgan's (1964) survey, Treganza's survey would not qualify as a comprehensive survey by today's standards. The survey report is more informative than Morgan's, but methodological and site detail is still lacking. It does appear that Treganza covered a greater variety of terrain than Morgan, given his description of tussocks, wet tundra, and brush encountered during the survey (Treganza 1964:9). Treganza divided the recorded sites according to nine subunits delineated by major drainages that intersect the park road:

1. Nenana River to Savage River: revisited two sites recorded by Morgan and recorded two new sites.

2. Savage River to Sanctuary River: revisited five sites recorded by Morgan and recorded two new sites. One of the new sites may be an extension of one of the previously recorded sites.

3. Sanctuary River to Teklanika River Bridge: revisited six sites recorded by Morgan.

4. Teklanika River Bridge to Igloo Creek: no sites noted.

5. Igloo Creek to East Fork of Toklat River: no sites noted.

6. East Fork of Toklat River to Toklat River: one new site recorded.

7. Toklat River to Eielson Visitor Center: no sites noted.

8. Eielson Visitors Center to Kantishna: no sites noted.

9. Moose Creek from Kantishna to it's upper tributary: no sites noted.

Treganza also conducted excavations at Teklanika West (HEA-001) and at Sheep Pass (HEA-148). Little information was gained through the additional excavation of the Teklanika site. Treganza was unaware of West's original datum and grid system, making it difficult to link the provenience of the recovered artifacts to the original collection with any precision (1964:16-17). As Treganza also lacked access to West's collections from the sites (1964:17), he was unable to conduct comparative analysis of the assemblages. Apparently the results of Treganza's excavations were not incorporated into West's (1965) report. Treganza does note that identifiable mammal bone was collected from the site, which could afford additional dating possibilities, depending on the quantity and condition of bone collected.

Testing at Sheep Pass (HEA-148) was primarily conducted to identify stratigraphy. Artifacts were collected from the surface of the site but no cultural stratigraphy or
artifacts were noted in the single trench excavated along an overhang.

Ironically, Treganza's survey had a negative impact on continued archeological research in the park. Following his assessment that "No further work is recommended for Mount McKinley National Park as human prehistory appears not to be one of its attributes" (Treganza 1964:31), the park discontinued additional survey efforts for more than a decade. Present day researchers would be very unlikely to make such sweeping statements, especially when based on such limited survey coverage.

Schimberg and Schlederman Analysis

Two University of Alaska-Fairbanks archeology students eventually conducted limited analysis of some of the materials collected at Sheep Pass (HEA-148) and Hogan Creek (HEA-152). Their findings, as presented in a 1967 term paper, were largely descriptive. Worked bone from HEA-152 may indicate favorable organic preservation (Schimberg and Schlederman 1967).

Plaskett 1975-76 Survey

In 1975, C.E. Holmes and D.L. Plaskett recorded a number of sites during a survey in the vicinity of the Nenana and Teklanika Rivers (Holmes 1975). This area was outside the park boundary at the time of the survey but later became incorporated into the park following the 1980 boundary changes mandated by ANILCA.

Plaskett conducted additional survey in this area during 1976 (Plaskett 1976), focusing on the Teklanika/Savage River area. The survey reexamined five previously recorded sites and located a number of new sites; 19 prehistoric and 12 historic sites.

Davis 1980 Reconnaissance

In 1980, Craig Davis, a National Park Service archeologist, conducted an archeological reconnaissance of DENA with the intent of providing information for a Denali General Management Plan (GMP). The reconnaissance was particularly needed in the unsurveyed 1980 ANILCA land additions to the park. Davis began by revisiting and evaluating many of the previously recorded sites in the park and looking for new sites in adjacent areas. In 25 days, an additional 16 sites were recorded, almost doubling the park's site inventory. Since the areas covered by Davis essentially overlapped previous survey routes, survey results were consistent with earlier surveys. Most of the newly recorded sites were surface lithic deposits, possibly hunting camps and overlook sites, associated with exposed high ground. Davis noted concentrations of sites in the Teklanika, Savage and Sanctuary River drainages, hypothesizing that many of these
could be "satellites" associated with the main (HEA-001 and HEA-002) Teklanika sites. Several of the sites contained microblades and cores like those recovered from Teklanika and other Denali complex sites. Other sites contained material suggestive of the Northern Archaic tradition. Although the investigation did not dramatically advance knowledge of Denali Prehistory or reveal high site densities in the surveyed portions of the park, it did support the need for additional research. As a result, the Teklanika area was designated a National Register Archeological District (HEA-085). There is no formal report on the Davis reconnaissance, other than field notes, memos, and transcripts of a professional paper on Denali archeology (Davis 1981) on file at the NPS Regional Office in Anchorage.

**General NPS Compliance/Clearance Investigations**

Compliance investigations are another source of archeological data. The phrase archeological compliance is used here to describe the practice of obtaining approval or "clearance" from a government-authorized archeologist in advance of potentially damaging activity. For the most part, federal land managers did not develop intensive archeological compliance programs until cultural resources began to be included in federal resource protection legislation. The legislative foundation for most federal cultural resource protection programs is the National Historic Preservation Act (NHPA) of 1966. As pertains to federal archeological compliance, the key section of NHPA is Section 106, which maintains that federal managers must consider the effects of all undertakings on historic properties (this includes historic and prehistoric resources) that are listed in, or potentially eligible for, the National Register of Historic Places.

For many years, compliance within Alaska's National Parks was handled on a case-by-case basis, by various cultural resource staff in the Alaska Region. Since 1988, a more intensive compliance program has been operated by the Archeological Resource Management Unit of the Branch of Archeology, Division of Cultural Resources, Alaska Regional Office. Archeological compliance investigations first began in DENA in the late 1970's. Over the years, the need for archeological compliance activity has grown with park visitation, development, and maintenance. Predictably, compliance activity in DENA has concentrated in several high-impact areas, especially the headquarters area, the several campgrounds along the park road, and the road corridor itself. The most common activities requiring archeological clearance include improvements to water and sewer facilities, bridge and road improvements, gravel borrow operations, and construction.

Clearances for certain non-park related actions, specifically mining claims, are dealt with separately. See the description of the Cultural Resource Mining Inventory and Monitoring program below. In most cases land exchanges also require compliance investigations. See the description of the 1988 and 1989 Land Exchange Surveys below.
It is not practical to describe every compliance inspection over the past decade. First, there are too many to make this practical and second, some details may be impossible to reconstruct. In many of the early inspections (pre-1985), detailed descriptions and adequate maps of exact areas covered by the clearances are absent. Although the Archeological Resources Management Unit is consolidating early information and retroactively preparing reports of past compliance actions, some of the early records remain vague, stating, for example, that the "area around the maintenance shed" was surveyed and cleared without specifying (or indicating on a map) the exact ground covered or the manner in which the examination was conducted. The absence of this type of detail makes it difficult to interpret survey results. Another problem is the absence of site forms, precise locational information and permanent site numbers for recorded archeological sites, which creates several problems. These problems will be discussed in the Assessment section.

Clearance surveys that have encountered archeological materials are definitely the exception rather than the rule in DENA. Few sites have been recorded during clearances. The number would be much higher, however, if historic structures and sites had been consistently assigned site numbers. For detail about specific archeological clearances, consult the records on file with the Archeological Resource Management Unit at the Alaska Regional Office in Anchorage.

Cultural Resource Mining Inventory and Monitoring Program

In response to a 1985 Federal Court decision, the National Park Service began a program to evaluate the effects of mining upon natural and cultural resources in the National Park Service system. The cultural resource part of this program, known as the Cultural Resource Mining Inventory and Monitoring (CRMIM) program, was a cultural resource inventory of active mining areas within Alaska's National Parks. The initial inventory phase of the CRMIM program began in 1986 and concluded in 1989. The monitoring phase of the program is expected to continue indefinitely.

Field work has been conducted by multidisciplinary field crews consisting of archeologists, historians, historical architects and a geoarcheologist. Mining claims as well as access roads and related secondary impact areas have been surveyed. At present, the CRMIM program has recorded 80 sites in DENA; 56 historic sites, 23 prehistoric sites, and 1 paleontological (non-cultural) site. As expected, most of the historic sites are associated directly or indirectly with mining, but a small number (13) appear unrelated to mining. Most of the prehistoric sites are surface lithic deposits but several were identified through systematic subsurface testing. One site, MMK-066, included a hearth feature that was radiocarbon dated to 2,000 BP (Beta #18044). Site files generated by the CRMIM program are maintained at the National Park Service Regional Office in Anchorage, Alaska. A report detailing the inventory is expected to be completed sometime after 1991.
1988 Land Exchange Survey

In anticipation of a proposed land exchange with the State of Alaska, National Park Service field crews conducted an archeological reconnaissance of selected exchange units during the 1988 field season. The exchange units were located along the extreme southwest (Swift Fork River area) and southeast (Tokositna and Coffee River areas) park boundaries.

The Tokositna-Coffee River parcel (approximately 2,760 acres total) consists primarily of recently glaciated terrain characterized by new alluvial deposits and standing water. Survey was conducted over 10 days, during which time available high relief areas (approximately 200 acres) were inspected. Submerged or inaccessible areas received aerial reconnaissance. Only recent historic materials (not recorded as historic sites) were located.

The Swift Fork parcel was the largest of the parcels (approximately 29,440 acres) and was investigated over a period of six weeks. Although little was known about the archeology of the Swift Fork area, the area had been identified as having good potential for containing late Pleistocene archeological sites in datable (stratified) contexts (Ten Brink 1984). The survey was not as successful as anticipated. Loess deposits along the river were not as extensive as hoped, and only a few deep stratified exposures were found. In addition to recent historic material (not recorded as historic sites), three prehistoric archeological sites were recorded (MMK-104, MMK-105, MMK-106). All three were small surface lithic deposits located outside the land exchange area. One of the sites (MMK-104) was associated with a thinly buried paleosol from which a sample was collected for future radiocarbon dating. Site forms and other materials documenting the survey are on file at the National Park Service’s Alaska Regional Office in Anchorage. The results of the survey, including discussion of the radiocarbon date, will be documented in a National Park Service report now in progress.

1989 Land Exchange/Kantishna Survey

Land exchange investigations continued during the 1989 field season. National Park Service field crews conducted an archeological reconnaissance of two parcels of National Park Service land prior to approval of a land transfer with the State of Alaska. The investigation covered approximately 13,000 acres in the Healy/Stampede area along the northeast boundary of the park, and approximately 8,400 acres in the vicinity of the Dunkle Mine, west of Broad Pass. While in the DENA area, the crew also conducted a brief additional survey of mining claims in Kantishna (600 acres).

No archeological resources were located during the Dunkle-area survey. Survey in the Healy/Stampede exchange unit and in Kantishna resulted in the discovery of 14 previously unrecorded prehistoric sites (FAI-348, MMK-111, MMK-112, MMK-113, HEA-
255, HEA-256, HEA-257, HEA-258, HEA-259, HEA-260, HEA-261, HEA-263, HEA-264, HEA-265) and one previously unrecorded historic site (HEA-262). Note that one of the prehistoric sites (FAI-348) is located outside the park. In addition to the newly recorded sites, two previously recorded historic sites were revisited: HEA-107 and HEA-108 (Plaskett 1976, 1978). Several of the prehistoric sites appear to be associated with a mineral or salt deposit in the Ewe Creek area, a well-known caribou hunting area. More detailed survey results will be presented in a forthcoming NPS report.

Additional Research

In addition to the previously discussed archeological research that has been conducted within DENA, relevant archeological research has been conducted in the surrounding area. Compared to many other parts of Alaska's interior, Denali National Park and Preserve occupies a good location in terms of archeological context, being bordered on three sides by some of the region's better-known sites and project areas.

Lake Minchumina

Just outside the northwest corner of the park lies Lake Minchumina, an area that has received detailed investigation. In 1962, the Birches site was located by Edward Hosley along the northwest shore of the lake. Excavation of the site revealed a small village consisting of eight semisubterranean houses. Initial interpretation of the site suggested a recent (AD 1,310) Athabaskan occupation (Holmes 1986:21). Later, more intensive analysis of the site suggested a winter encampment dating to approximately 1,500 BP, with an artifact assemblage similar to Ipiutak (a later stage of the coastal-focused Norton tradition) assemblages (West 1978). More recently, excavation of two sites at the eastern end of the lake (MMK-004 and MMK-012) provided the basis for a local cultural sequence. Excavations at the two sites suggest a culture sequence consisting of two major traditions separated by a break in occupation. The earlier of the two traditions, the Minchumina tradition, represents a local variant of the Northern Archaic tradition consisting of three related phases and a brief, intrusive Ipiutak (Norton) occupation. The more recent phase "...has affinities with protohistoric Athabaskan culture" (Holmes 1986:159). The nature of the gap separating the two traditions is unclear, possibly representing the truncation of the later Minchumina tradition peoples by Athabaskans, or perhaps gaps in the present data. The Ipiutak material at Lake Minchumina links the interior cultural sequence with the coastal-based Norton tradition. Such a link could be discovered through future research in DENA.

The Susitna River Drainage

Most of the archeological research conducted within the Susitna drainage, located southeast of DENA, has been associated with proposed hydroelectric development
By far, the most intensive phase of Susitna research was accomplished during the Susitna Hydroelectric Project cultural resource program undertaken by the University of Alaska Museum between 1979 and 1985 (Dixon et al. 1985). A major goal of the research was to establish a preliminary cultural history sequence within the study area, which extended along the middle Susitna River.

Nearly 250 new archeological sites were located during five field seasons of archeological survey. Ten sites/loci were assigned to the Euroamerican tradition (AD 1900 to present), 114 sites/loci were assigned to the Athabaskan tradition (1,500 BP to approximately 100 BP), 38 sites/loci were assigned to the Late Denali complex (3,500 BP to 1,500 BP), six sites/loci were assigned to the Northern Archaic tradition (approximately 5,200 to 3,500 BP), and seven sites/loci were assigned to the American Paleoarctic tradition (5,200 to 10,500 BP) (Dixon et al. 1985:8-172-186).

Probably the most important result of the museum’s research was the formation of a regional stratigraphic chronology based on a sequence of three distinct, prehistoric volcanic tephras (volcanic ash deposits) found in the area; Devil tephra, dated from 1,400-1,500 BP, Watana tephra, dated from 1,800-2,700 BP, and Oshetna tephra, dated from 5,200-5,900 BP. When the tephras are present in an archeological site, they are sufficiently distinct from other sediments and from one another that the archeologist can date the cultural strata in relation to the tephras. For example, artifacts recovered from below Oshetna tephra can be assumed to have been deposited before 5,900 BP. The Susitna tephra sequence has been informally identified at sporadic locales throughout DENA. The effect these ash falls had on the prehistoric peoples and ecology of the region has been identified as an important future research question for the region (Saleeby et al. 1985).

The North Alaska Range/Nenana Valley

The Nenana River Valley, possibly the single most important research area in early Interior prehistory, forms part of DENA’s eastern boundary and lies to the north and west of the Susitna drainage. Much of the Nenana Valley has been extensively surveyed and several important archeological sites, with components ranging from the Late Pleistocene to the late prehistoric period, have been excavated. Most of these sites have already been discussed in the Chronology section and will be only briefly noted here.

Recognition of the archeological significance of the Nenana Valley began with the discovery and excavation of the Dry Creek site (HEA-005). Excavation by University of Alaska-Fairbanks archeologists between 1973 and 1977 revealed a large, stratified in multi-component site. Most importantly, the loess deposits in which the cultural
material was buried offered some organic preservation, making faunal analysis and radiocarbon dating possible. Component II, the middle and most extensive of the three components, was dominated by microblades and microcores and is considered representative of the Denali complex. Component II was radiocarbon dated to approximately 10,500 BP. The deepest component, Component I, contained a bifacial point assemblage that completely lacks microblades and microblade cores. The uppermost component, Component IV, produced side-notched point bases and flakes and lacked microblades. Component IV is considered representative of the Northern Archaic tradition, dating to between 3,000 and 5,000 BP (Powers et al. 1983). A major geological and archeological research effort known as the North Alaska Range Project (NARP) was conducted under contract by the National Geographic Society and the National Park Service between 1976 and 1982 (Ten Brink 1984). The project was an outgrowth of the interdisciplinary research at the Dry Creek site (Powers et al. 1983). The central goal of the NARP survey was "...to define the geologic contexts most favorable to the occurrence and preservation of early human sites (Ten Brink 1984:2)." The Nenana Valley was selected for survey after preliminary research revealed favorable geological characteristics:

1. Extensive broad terraces capped with loess, "similar to eastern Siberian early-man sites"
2. Well stratified eolian and fluvial deposits of Late Pleistocene age
3. Large areas that were unglaciated during the Pleistocene
4. Numerous stratigraphic exposures in terrace risers along riverbanks
5. Conditions favorable to good fossil preservation
6. The potential for regional chronological control through dating of the glacially derived terrace and loess sequence [Guthrie and Powers in Ten Brink 1984:3]

Archeological survey and testing were conducted in association with the NARP study between 1977 and 1980. The initial goal of the field work was to locate early (pre 10,000 BP) occupations in datable geological contexts. The search for sites was based upon a proposed settlement pattern that predicted that Pleistocene hunters would have migrated up the rivers of the Northern Foothills of the Alaska Range in search of summer and fall game (Hoffecker 1980:2). The bluffs and terrace edges along the Nenana Valley were determined to be particularly suitable places to look for sites associated with game observation. Another important goal of the research was to better understand the bifacial point technology, eventually termed the Nenana complex, that appeared to pre-date Denali complex blade and core materials:
Both the results of the Dry Creek excavations and the discovery and dating of the Moose Creek site in 1978 have unequivocally confirmed the existence of a bifacial technology in this period. The recognition of such a technology in Pleistocene Beringia is a relatively recent development, and one with potentially important implications for the peopling of the New World. In order to interpret the relationship of the point technology to the previously known microblade assemblages of Beringia (the Diuktai and Denali complexes), new sites in this time range must be discovered" [Hoffecker 1980:4].

The results of the field work were mixed. Researchers had difficulty locating very old (pre-12,000 BP) loess deposits and fewer archeological sites than anticipated were located. The report of archeological investigations (which discusses only those sites relevant to the research goals), identifies several stratified sites within the Late Pleistocene to Mid-Holocene time range; Dry Creek (HEA-005), Moose Creek (FAI-206), Panguingue Creek (HEA-137), Little Panguingue Creek (HEA-038), the Browne site (FAI-205), the Usibelli site (HEA-128), the Slate Creek site (HEA-129), Owl Ridge (FAI-091), and the Walker Road site (HEA-130). In some cases, research papers, reports and Master's Theses have been completed that discuss excavations at some of the stratified early sites in the Nenana/Teklanika area; Panguingue Creek (Powers and Maxwell 1986); Owl Ridge (Phippin 1988); Moose Creek (Hoffecker 1982; Powers et al. 1983; Powers and Hoffecker 1989); Walker Road (Goebel and Powers 1989; Powers and Hoffecker 1989).

In 1975, archeologist D.L. Plaskett conducted a brief archeological reconnaissance in the Teklanika area. In August and September of 1976, Plaskett returned to the area to conduct archeological survey along the Nenana and Teklanika/Savage River areas (Plaskett 1976, 1978). The survey area lay outside park boundaries but included areas that were later added to the park through the ANILCA "North Additions". This survey also included a geological reconnaissance (Thorson 1977). Seven new sites were recorded along the Nenana River: HEA-032, HEA-033, HEA-034, HEA-035, HEA-036, HEA-037, and HEA-038. Eighteen new prehistoric and 12 new historic sites were recorded along the Teklanika River: HEA-086, HEA-087, HEA-088, HEA-089, HEA-091*, HEA-092, HEA-093, HEA-094*, HEA-095, HEA-105, HEA-106, HEA-107*, HEA-108*, FAI-091, FAI-094, FAI-096, FAI-106, FAI-107, FAI-108, FAI-109, FAI-121, FAI-122, FAI-123, FAI-124, FAI-125, FAI-126, FAI-127, FAI-129, FAI-130, and FAI-138. In addition to the newly recorded sites, five previously recorded sites along the Teklanika were briefly re-examined: HEA-011, HEA-021, HEA-022, HEA-023*, HEA-024* (the sites marked by an asterisk lie within present-day DENA boundaries). Among the new sites was FAI-091, the Owl Ridge site, which has since been excavated and yielded a Nenana complex assemblage (Phippin 1988).

In 1977, University of Alaska-Fairbanks archeologists conducted additional survey along the Nenana and Teklanika Rivers (Powers et al. 1983:406). Like the Plaskett (1976)
and NARP surveys, the research design focused on the search for Pleistocene age archeological sites. Although many new sites were located, most were surface or very shallow deposits. The researchers attributed the lack of success to difficulties in finding deep deposits, difficulties in penetrating frozen deposits, and sampling problems. Fourteen new sites were recorded in the Nenana Valley: FAI-140, FAI-141, FAI-142, FAI-143, FAI-144, FAI-145, FAI-146, FAI-147, FAI-148, FAI-149, HEA-138, HEA-139, HEA-140, HEA-141. In addition, two previously recorded sites were revisited: HEA-035 (Plaskett 1976, 1978) and HEA-137 (Hoffecker 1980). No new sites were found in the Teklanika Valley, but eight sites recorded by Plaskett (1976, 1978) were revisited: FAI-121, FAI-122, FAI-123, FAI-124, FAI-125, FAI-126, FAI-127, FAI-091.

The Carlo Creek site (HEA-031) was referenced in the preceding discussion of chronology. The site is located along the Nenana River on floodplain deposits (Bowers 1980). The largest and earliest of the two components at the site, Component I, dates to 8,500 BP. This Early Holocene component appears to be a task-specific seasonal hunting camp, where the manufacture and use of bifacial knives and scrapers, initial game dismemberment, and marrow extraction occurred. The complete absence of microblades from the assemblage, in contrast to other well-known assemblages from this time period (Dry Creek II) is significant. Bowers attributed the lack of microblades to specialized activities at the site (Bowers 1980).

A site with an age and function similar to the Carlo Creek site but with a very different artifact assemblage was found in 1985 (Holmes 1988). Excavation of HEA-239 revealed a distinctive bifacial point assemblage and hearths that provided sufficient organic material for a date of approximately 8,500 BP, the same time period as Component I at HEA-031. Like HEA-031, the site lacks the microblade technology that figures so prominently in the other Nenana Valley sites/components of corresponding age. But unlike HEA-031, the lithic assemblage is dominated by a number of small, thin bifacial points and very small flakes. The points are described as resembling Siberian Neolithic arrowpoints and appear significantly different from those recovered from other sites in the Nenana Valley. The site may have been a very short-term occupation where successful hunters paused to repair specialized tools and process game for transport back to a base camp. As at the Carlo Creek site, the limited range of activities during such an occupation was offered as an explanation for the absence of a broader range of tools, such as scrapers, microblades, and biface reduction materials (Holmes 1988).

In addition to sites like Dry Creek (HEA-005) and Panguingue Creek (HEA-137) that are best known for their Nenana and Denali complex assemblages, later occupations have also been well documented by research in the Nenana Valley.

The Nenana Gorge site (HEA-062), located above the Nenana River near Healy, provides information about much later prehistoric culture in the Nenana Valley (Plaskett 1977). The site consists of a prehistoric component overlaid by historic
(1920s) materials associated with construction of the Alaska Railroad. The prehistoric component represents seasonal use by late prehistoric Athabaskans, possibly as a late summer/early fall hunting camp. The excavation of the prehistoric component yielded faunal material, fire-broken rock, pottery (cord marked and smooth sherds), bone artifacts (cut and incised bone), charred wood fragments, one copper fragment, and a variety of lithic artifacts (points, knives, scrapers, retouched and utilized flakes, hammerstones, anvils). Most of the artifacts appeared to have been manufactured from local materials, but trade is indicated by the presence of obsidian (possibly from the Koyukuk River), copper (possibly from the Copper River area) and chalcedony (Plaskett 1977:216). In addition to apparent weapon parts (bone and stone projectile points), functional analysis of the assemblage suggested that activities consistent with butchering and meat processing (pounding, chopping, cutting, scraping, splitting, cooking) occurred at the site (Plaskett 1977:106-107). Species represented in the faunal collection are caribou, Dall sheep, black bear, snowshoe hare, hoary marmot, ground squirrel, and a large mammal of moose or bison size range that could not be classified. Although based on a small sample, Dall sheep, followed in turn by the unidentified large mammal and caribou, represent the most economically important species (Plaskett 1977:127).

The Denali Highway and Tangle Lakes Area

A number of archeological sites are located along the Denali Highway, which runs roughly northwest-southeast between Cantwell at the park's eastern boundary and Paxson on the Richardson Highway. Ivar Skarland and James Keim of the University of Alaska conducted one of the earliest archeological surveys along the highway after artifacts were discovered during construction (Skarland and Keim 1958). Two main site areas, the Ratekin site and Hosley Ridge, were recorded toward the eastern end of the highway. Both are thought to represent variations in hunting and butchering caribou. According to Skarland and Keim, the Ratekin site consists of:

. . .large numbers of refuse flakes, complete specimens, and a few broken implements. According to the available evidence, the "site" was apparently not a camp location but a killing ground. . .the large number of unbroken specimens, mostly "arrowheads" lost during the hunt, suggests that it was a butchering ground where the caribou were funnelled into a narrow corridor created by the muskeg to the south and the steep foothills to the north [1958:80].

The Hosley Ridge site, located near Tangle Lakes, was found to consist mainly of scraping and cutting implements and flakes. The site's proximity to the lakes and the relative lack of bifacial point forms indicated that the site may be the location of a caribou drive; a place where caribou were driven into a lake and killed by hunters in canoes (Skarland and Keim 1958:80).
West (1967) characterized the Ratekin and Hosley Ridge assemblages as follows, describing them as comparable to the Sheep Pass assemblage recovered by Morgan (1965) in Denali:

The range of forms in these purely lithic collections was quite wide but included side-notched points, lanceolate forms, large side-and-end-scrapers, many end scrapers, bifacial knives, and one sandstone abrader. There were no burins nor indications of blade technology in these collections [West 1967:362-363].

The Alaska State Division of Parks conducted an archeological survey of the Denali Highway in 1976 (Dixon 1977). Two new sites were recorded at the western end of the highway; HEA-096, located at Cantwell, and HEA-097, located approximately 10 miles to the east at Edmonds Creek. HEA-096 is a surface lithic deposit from which a scraper/burin, biface fragment, several retouched flakes and waste flakes were collected. HEA-097 is a more complex site, consisting of five separate localities of lithic material that extend to 18 cm below surface. Preserved mammal bone and possible volcanic tephra were noted in one locality. Artifacts included a crudely flaked ulu, a glass bead, scrapers, biface fragments, a possible core tablet, a core/burin, and flakes. A preliminary assessment suggested that the site may have been a single component protohistoric or late prehistoric kill site (Dixon 1977).

Butte Lake (HEA-189), is located west of the point at which the highway crosses the Susitna River (Betts 1987). This site, which has already been discussed in the Chronology section of the overview, is a stratified, multi-component site containing associated notched points and microblades in a datable context. Informant interviews revealed that, at least during the protohistoric period, HEA-189, like the Hosley Ridge site, was a major hunting locale at which caribou were driven into the lake and speared by hunters in canoes. The artifacts, features, and excavated faunal remains from the upper three components, dating from approximately 5,000 BP to the late prehistoric period, are consistent with this type of hunting/butchering function; including assorted weaponry (microblades and bifacial points), cache pits, hearths, smashed caribou bones, an anvil stone, and lithic (cutting, chopping, and scraping) implements (Betts 1987:15).

Located south of the Denali Highway in the headwaters of the Delta River, the Tangle Lakes area contains a relatively dense concentration of archeological sites that are defined as the Tangle Lakes National Register Archeological District. Although Northern Archaic and late prehistoric Athabaskan assemblages are represented in the Tangle Lakes assemblages, it is the Denali complex assemblages, which have been shown to occupy the extinct shoreline of a massive lake formed by ice damming and glacial meltwater, that are best known (West 1981:126-128).
Previous Ethnographic Research

Little formal ethnographic research has been conducted within DENA. This section instead summarizes the information from which the Ethnographic Overview was prepared. This information is ordered by group and is not limited to research that has occurred within DENA, as a regional perspective is essential to ethnographic reconstruction.

Tanaina

A few oral histories recorded during the Susitna Dam Project (Greiser et al. 1986) and native place names studies (Kari and Fall 1987) relate the aboriginal history of the upper Susitna River Tanaina; otherwise very little has been published on this regional group. Military explorations and the occasional journal of an adventurer around 1900 provide only fleeting glimpses of aboriginal Tanaina and Western Ahtna in the upper river area (Cook 1908; Moore 1987). Early 19th century Russian records, Osgood's (1966) ethnography, and more recent ethnohistorical works by Townsend (1981) and others focus on Tanaina far removed from DENA. Wrangell's 1839 map (Kari and Fall 1987) was compiled from many sources including Athabaskans from distant groups. It is valuable for its illustration of aboriginal trail systems and major geographic features in southcentral Alaska and parts of the interior.

Ahtna

Literature on the Ahtna, except for Western groups, is abundant. Nearly all the data, be it from early explorers or more recent ethnographic works by Frederica de Laguna and Catherine McClellan (de Laguna 1970; de Laguna and McClellan 1981; McClellan 1970a, 1970b), Holly Reckord (1983), and others, ignores the Western Ahtna. Oral histories completed during the Susitna Dam Project (Greiser et al. 1986) provide some information for this area. Linguistic and place name studies by James Kari (Kari 1977; Kari and Buck 1983) contribute to the understanding of subsistence patterns. Recent work done by the Bureau of Indian Affairs investigation of 14(h) historic and cemetery sites contains quantities of historical data. Untranscribed material collected during various place name studies and held at the Alaska Native Language Center in Fairbanks, is another source of information on Western Ahtna history.

Lower Tanana

Lieutenant Henry Allen's 1885 journey down the Tanana River provides the first account of people along that river (Allen 1887). Alfred Brooks, of the USGS, provided information on interior Natives for 30 years beginning in 1898 (Brooks 1900, 1953).
Both of these sources touch on Nenana inhabitants, but not in depth. A 1929 ethnographic study (McKennan 1959) dealt only with the Upper Tanana. Social grouping data for the entire length of the river was gathered by McKennan in the summer of 1962, but some of this information remains unpublished. Less is known about the aboriginal settlement patterns of the Nenana-Toklat group than any of the other four groups that used the DENA region; aside from Allen, Brooks, and cursory remarks by other USGS and military personnel, no ethnographic study has been done. Oral histories (Gudgel-Holmes 1988), and a subsistence study (Shinkwin and Case 1984) provide land use and genealogical data but do not touch on the upper Nenana River area. Kari's unpublished place name information may help fill that void.

Koyukon

The earliest references for the Koyukon of the Kantishna drainage, occur between 1899 and 1919 and consist of the accounts of four explorers, a photographic collection, census records, and notes from two missionaries. Lieutenant Joseph Herron's 1899 map (Herron 1901) noted Indian trails and winter villages but barely mentioned the two months he spent in Telida village. His diaries, if ever found, should reveal an abundance of information. Judge James Wickersham (1938) recorded legends and detailed activities at three Kantishna River Indian camps he visited in May, 1903 on this attempt to climb Mt. McKinley. George Gordon (1917) was fortunate to spend six days at a native camp at Lake Minchumina in 1907. Although he had no interpreter, he gathered information critical to linguists, and made a few other key observations. Charles Sheldon (1930) lived one winter and two summers in the Kantishna and recorded his meetings with natives. Stephen Foster left an impressive photographic collection dated from 1914-1919 (Foster nd). The captions on the photographs are as valuable as the pictures themselves. Jules Jetté, a Jesuit priest along the Yukon River in the early 1900s, recorded some place names for the Kantishna region when knowledgeable informants passed by (Jetté 1910). Hudson Stuck, an Episcopal missionary, visited Lake Minchumina during the winters of 1909 and 1914, and traveled the region again in 1913 when attempting to climb Mt. McKinley. His journals (1909, 1915) contain the names of native people, some history of the region, trail systems, and payments and descriptions of goods purchased from natives (1909, 1915). The 1900 and 1910 census for Cos Jacket, taken in May and January respectively, provides information on seasonal population fluctuation and group identification. No ethnographic or place name work has been done for the Kantishna Koyukon except that found in the detailed life history of Abbie Joseph (Joseph 1982-1984).

Upper Kuskokwim

Literature for the Upper Kuskokwim is limited. The earliest mention of this group comes from explorer's journals, primarily Lieutenant Lavrentii Zagoskin, who traveled
up the Kuskokwim River to near the present day community of McGrath in 1844 (Zagoskin 1967). Much later, others added bits of information: George Gordon (1917), sponsored by University Museum, Philadelphia, floated down the North Fork of the Kuskokwim in 1907; Lieutenant Joseph Herron of the U.S. Army traversed the area of the South Fork of the Kuskokwim across Telida and Lake Minchumina to Tanana in 1899 (Herron 1901); and the USGS's Josiah Spurr traveled down the South Fork in 1898 (Spurr 1900). Edward Hosley's 1960s ethnographic study is the first and only of its kind for the upper river (Hosley 1966). Linguistic work was done in the 1960s and 1970s by Raymond and Sally Jo Collins, and Michael Krauss (Hosley 1981a:622). Additional aboriginal subsistence data were gathered by Jeff Stokes (1985).

Historical Archeology: Previous Research

While some of the previous historical fieldwork conducted in DENA has followed a multidisciplinary/anthropological approach (Brown 1982), formal documentation of the archeological values of DENA's historic sites did not begin until 1986, when the Cultural Resources Mining Inventory and Mining (CRMIM) program was implemented. As described in the Previous Archeological Research section, the CRMIM program was established in response to a 1985 Federal Court decision which directed the National Park Service to evaluate the effects of mining upon natural and cultural resources within the Alaska NPS system. The field work has been conducted by multidisciplinary field crews including archeologists, historians, historical architects and a geoarcheologist. The CRMIM maintains archeological site files for each of the sites recorded.

Prior to the CRMIM program however, DENA's historical resources were documented and evaluated solely through traditional historical research programs. These are the National Register program, the Denali Historic Structures Report (HSR), the Denali Cabin Inventory, the List of Classified Structures (LCS), and the Historic American Building Survey (HABS) and Historic American Engineering Record (HAER) programs.

Locally, the National Register program is administered by the Regional Historian at the Alaska Regional Office. Five historic properties in DENA have been researched and formally evaluated for National Register eligibility. Four of these have been found eligible; Mount McKinley National Park Headquarters Historical District, the Teklanika Archeological District, the Wonder Lake Ranger Station, and the Denali National Park and Preserve Cabins (a thematic/group nomination). The Dunkle Mine was investigated and found ineligible. Other sites, including the Stampede Mine, are expected to be evaluated as part of the forthcoming DENA Historic Resource Study (Brown 1990). Information for each of these sites is on file at the Alaska Regional Office.

The three-volume DENA Historic Structures Report (Snow et al. 1987) documents 14
The Denali Cabin Inventory is maintained by the DENA resource management staff. The inventory is a listing of 236 (at most recent count) known or reported historic structures/sites in the park. The stated objective of the inventory is to "locate as many sites as possible". Information has come from several sources, including Brown 1982, Schneider et al. 1984, and firsthand observations by resource and ranger staff during surveys, patrols and studies. Some of the sites on the cabin inventory appear on other inventories, such as the AHRS files.

The LCS is an inventory of historic and prehistoric structures within the National Park System that meet the criteria of the National Register of Historic Places or are contributing elements of sites or districts that meet the National Register criteria. In selected instances, non-eligible structures also may be added to the LCS. Presently the Regional Historical Architect maintains DENA's LCS records. Additional information about the LCS program is included in the Technical Supplement; Chapter 5:1-6, of NPS-28 (U.S. Department of the Interior, National Park Service 1985).

The HABS and HAER programs (often lumped together and called the HABS/HAER program) are the National Park Service's historical, architectural and engineering documentation programs. These programs provide detailed documentation of historic resources that is incorporated into the HABS/HAER collections at the Library of Congress. The goal of the collections is to provide architects, engineers, scholars, and interested members of the public with comprehensive documentation of sites, structures and objects that are significant in American History. Additional information is included in the Technical Supplement; Chapter 5:21-22, of NPS-28 (U.S. Department of the Interior, National Park Service 1985).

Although each of these programs provides certain aspects of historical site documentation, their objectives and methods are distinct from historical archeology. Without a well-defined research program for historical archeology, an important category of DENA's archeological resources has been overlooked. This need will be discussed in the Assessment and Recommendations sections.
KNOWN ARCHEOLOGICAL RESOURCES

Introduction

For the purpose of this Overview and Assessment, an archeological site is defined as the locus of any surviving physical evidence of past human activity, including the record that activity leaves upon the environment. This review presents the site information that has been compiled for the park, to date. It is a summary of all the sites that have been recorded, but this in no way should be considered a final list of every site in the park; without question, continued research will show that today's known sites are a small percentage of the sites in the park.

Most of the known sites in Denali have been assigned numbers through an inventory system known as the Alaska Heritage Resource Survey (AHRS). The AHRS files are maintained by the Division of Parks and Outdoor Recreation, Office of History and Archeology, Alaska Department of Natural Resources. The numbers are preceded by a three letter code indicating the USGS topographic map sheet or quadrangle (1:250,000 scale) on which they are recorded. For example, the third consecutively recorded site in the Healy quadrangle would be numbered HEA-003. Denali National Park and Preserve is covered by four quadrangles: Healy, Talkeetna, Mt. McKinley, and Kantishna.

Before the implementation of the AHRS system, early surveys and reports used independent numbering systems to record sites. As the years have passed most of these sites have been assigned AHRS numbers. Throughout the Overview and Assessment, sites will be addressed by their AHRS number. Researchers consulting original reports and files will be faced with the original designations and so in some cases, both designations will be given (Tables 3-5, Appendix A).

With the exception of sites recorded during the Cultural Resources Mining Inventory and Monitoring program, historic sites generally have not been assigned AHRS numbers. These sites will be referred to by temporary NPS field numbers or by name. In a few instances, prehistoric sites remain keyed to temporary NPS field numbers. Temporary field numbers generally incorporate the park unit's four letter NPS designation, the year of fieldwork and a consecutive site number for that year. For example, the first site recorded in Denali during 1982 would be DENA-82-001. Care must be taken to avoid confusing temporary site numbers with the numbers used to denote individual compliance projects (82-DENA-001 would be the first compliance project in DENA during 1982).

Past site numbering problems in DENA have almost certainly caused the loss of information through confusion. In the interest of accuracy, consistency, and research accessibility, all sites should be assigned AHRS numbers as part of the follow-up documentation process. This urgent need has been addressed in the Resource
Assessment section.

Given the large number of sites, site information is presented in two forms; first, in tabular form (Tables 3-5, Appendix A) and secondly, in an annotated site list (Appendix B). These sources are highly summarized and are intended to be used as initial reference points.

Available records indicate that there are 188 known sites in DENA; 171 sites on the AHRS inventory (88 historic, 84 prehistoric, and one paleontological) and 18 sites with temporary site numbers (16 historic, one prehistoric isolated find, and one prehistoric/ethnographic period site). One site with both prehistoric and historic components (MMK-031) is listed on both the prehistoric and historic site summary tables, but is counted as one site in the total. The recorded sites vary widely in terms of the level of documentation, ranging from the stratified, excavated and dated Teklanika sites, to sites recorded only in minimal field notes and several historic sites that lack any field documentation.

Prehistoric Resources

An archeological component or site is often assigned to the prehistoric period if it lacks any indication of historic activity and consists exclusively of features and implements of traditional (native) manufacture, such as chipped stone and bone. Within this definition, a broad range of materials and features are possible, some of which offer clues to the period of manufacture and intended function. Some of the clear-cut examples of diagnostic traits, such as Campus-type microblade cores or certain side-notched projectile points, have been discussed in the Cultural Environment section and very grossly summarized in Figure 4.

In a high percentage of instances, however, archeological surveys in Alaska's Interior turn up sites lacking readily diagnostic elements. Within DENA, for example, the most commonly-occurring site type is the small surface scatter of waste flakes, perhaps with a fragment or two of a formed tool. For these sites, known only from what can be seen on the surface (either due to limited investigation or the nature of the archeological deposit itself), ready judgments concerning time period and function are rarely possible. Such judgments depend on knowledge of the range of the artifacts in a site (or component) and the archeological context in which they occur. With the exception of the Teklanika sites, these conditions are uncommon among DENA's recorded sites, thus, only the most general characterization is possible at this time.

Table 1, below, gives a general breakdown of recorded prehistoric sites. More detail is included in Table 4 (Appendix A), which summarizes DENA's recorded prehistoric sites. Sites have been listed according to their AHRS number and the USGS map quadrangles upon which they are recorded. Due to the lack of recorded detail for most of the sites,
no assessment of site function is given. The Type of Deposit category refers to the physical characteristic of the archeological deposit itself. This table can be cross referenced with Table 3 (Appendix A), which keys research projects to the sites that were recorded or investigated. Where archeological collections are known to exist, they have been noted in Table 3.

Eighty-four (45%) of DENA's 187 cultural sites are prehistoric or protohistoric (the non-cultural paleontological site has been excluded from the totals and percentages given here). Twenty of the prehistoric sites (24%) are isolated finds; locations at which a single artifact, and no supporting cultural material, was noted. All of the isolated finds are surface finds. Of the remaining 64 sites, 53 (83%) are surface-only deposits. When these two categories are combined, 73 (87%) of the known prehistoric sites in DENA are exclusively surface deposits, at which small numbers of lithic artifacts (often flaking debris), occur on denuded bedrock exposures or areas with deflated soil.

Only 11 (13%) of the known prehistoric sites have subsurface cultural material; this includes nine sites that have both surface and subsurface components (cultural material extends from the surface to below surface), and two sites that are entirely buried (no cultural material visible on the ground surface). As a group, the subsurface sites are generally shallow, in many cases extending as few as ten centimeters below surface.

It is likely that many of these prehistoric sites represent various hunting camps, overlooks, butchering locales, but at this time, given the level of existing information, a more exact functional classification is not practical.

Table 1. Prehistoric Sites

<table>
<thead>
<tr>
<th>Description</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolated Finds (surface finds)</td>
<td>20 sites</td>
</tr>
<tr>
<td>Surface Lithic Deposit</td>
<td>53 sites</td>
</tr>
<tr>
<td>Surface/Subsurface Lithic Deposit</td>
<td>9 sites</td>
</tr>
<tr>
<td>Subsurface Lithic Deposit</td>
<td>2 sites</td>
</tr>
</tbody>
</table>

Total: 84 sites
Plate 3. A Typical Surface Lithic Deposit: mapping and inventorying the site (above); and bifacial tool found at the site (below).
Figure 8. Distribution of Known Prehistoric Sites.
DENA's curatorial collection of prehistoric items is fairly diverse. The artifacts are listed according to a somewhat standardized framework of artifact types prepared by archeologists during a curatorial inspection contract (Earth Technology Corporation 1984). Existing categories and frequencies are given below. The figures include only the artifacts that have been cataloged. Categories are mutually exclusive (no item is assigned to more than one category), but the categories themselves are, in some cases, confusing and possibly redundant. Standardized definitions have not been used for artifact categories. For example, the categories of flake, flake-utilized, utilized flake, utilized/retouched flake, biface trimming flake, and blade-like flake, could all apply to a flake with some retouch or use-wear. This problem can only be resolved through collections research. Existing collection categories are shown here in alphabetical order, with the number of individual items shown in parentheses:

- Ash Sample (1)
- Bevelled Flake (2)
- Biface (99)
- Biface Trimming Flake (26)
- Blade (110)
- Blade & Blade-Like Flake Core Facial Rejuvenation Flake (5)
- Blade or Blade-Like Flake Core Facial Rejuvenation Flake (2)
- Blade or Blade-Like Flake Core (11)
- Blade or Blade-Like Flake Core Fragment (1)
- Blade-Like Flake (65)
- Bone (31)
- Burin (26)
- Burin on Biface (1)
- Burin on Flake (4)
- Burin Spall (20)
- Burin Spall Core (18)
- Charcoal (5)
- Core (64)
- Dart or Lance Point (2)
- End Scraper (18)
- Flake (1722)
- Flake Utilized (1)
- Generalized Biface (65)
- Generalized Flake Core (15)
- Generalized Uniface (25)
- Generalized Uniface, Finished (1)
- Knife End Blade (4)
- Knife Side Blade (5)
- Lithic Shatter (87)
- Material Sample (1)
- Microblade (32)
Microblade Core (14)
Microblade Core Facial Rejuvenation flake (2)
Microblade Core Tablet (7)
Miscellaneous Knife (23)
Nonutilized Flake (1526)
Notched Projectile Point (2)
Ovoid Biface (3)
Pebble/Chunk (413)
Projectile Point (8)
Scraper (2)
Spear Point (1)
Tool (5)
Unmodified Bone (3)
Utilized Flake (3)
Utilized Retouched Flake (69)
Weapon Side Blade (1)
Worked Bone (1)

Ethnographic Resources

As with DENA’s prehistoric resources, it is difficult to characterize the park’s ethnographic resources; relatively few sites are known and even fewer have been visited or documented. This does not mean that there were few Athabaskan occupations in the DENA area; more likely it reflects the lack of survey directed at ethnographic period sites, the difficulty in tying sites to the ethnographic period, and the scant nature of the archeological record itself.

At present, no formal, intensive archeological survey or field search for ethnographic period sites has been undertaken within DENA. While there are known ethnographic period sites, such as the villages identified in the North Additions land use report (Schneider et al. 1984), these have not been verified or recorded as archeological sites through actual site visits. Isolated exceptions include the search for Geese House (Morton 1983) and three ANCSA 14(h)1 historic-cemetery sites within DENA (two of these are in the Birch Creek Village area and have been surveyed by the BIA ANCSA Office; the third is in the Bearpaw River area and has not been surveyed).

Even when surveys are conducted, it has been suggested that archeologists should expect to find relatively few ethnographic sites during archeological surveys. Gudgel-Holmes and Holmes (1989:33) reason that because the ethnographic period was a relatively short span of time, ethnographic sites should be fewer in number than the prehistoric sites that had been accumulating for thousands of years.
Problems relating to the identification of ethnographic sites are not unique to DENA. As discussed in the preceding Ethnographic section, archeologists are often able to use ethnographic research to locate sites identified in the literature or by informants. This has frequently proven true for well-known village sites or other historically important sites. But in most cases, it can be difficult to tie a given archeological site to the ethnographic period. Such an identification can be made if historic period artifacts, such as beads, non-Native metal and ceramics, are incorporated into a cultural deposit that also contains traditional Native artifact forms, such as flaked stone, and worked bone, antler and wood. But more often than not, in the absence of identifiable historic materials or archival research that indicates otherwise, sites of apparent Native origin tend to be classified as prehistoric. A higher probability that historic materials may not be recognized in a site also may be built into reconnaissance level survey, since site documentation is not likely to include a detailed inventory of artifacts or extensive testing of subsurface deposits.

Perhaps the most archeologically valuable ethnographic information to be compiled for the park is a place names study by Dianne Gudgel-Holmes (1990). Working from ethnographic sources and interviews, Gudgel-Holmes was able to identify and map certain locations within the park by their Athabaskan names (Appendix C). In some cases, translations of the Athabaskan place names suggest particular subsistence activities, such as "end of fish run" or "creek of the one that we go up to watch for game". Although the place names themselves are not archeological sites, archeologists often find this information useful in planning surveys and analyzing site distribution patterns. One example is the 1989 DENA land exchange survey. Archeologists searched for, and were able to find, a known mineral lick near Ewe Creek and then found a cluster of previously unrecorded prehistoric sites in the area.

Historical Archeology: Known Resources

Historical sites with archeological value are the domain of the field of historical archeology. All archeology is anthropology; it involves the study of the human cultural process. Where the prehistoric archeologist studies the physical remains left behind by prehistoric peoples, the historical archeologist studies the physical remains of human activity during the historic period.

Unfortunately, the discussion of historical archeological resources in DENA is limited by the information presently available. While historical archeology is an expanding field, it has not routinely been included in archeological research and analyses. As a result, very different types of information often exist for prehistoric and historic sites; prehistoric sites are recorded with physical remains and archeological potential in mind, while historic sites are documented mainly through written records and archival sources with the goal of linking them with known events or people.
Plate 4. Recording Historic Sites in DENA: wagon remains (above); and stone retaining wall (below).
Plate 5. Archeologists encounter a wide variety of artifacts in DENA: glass and metal historic containers (above); and broken bifacial tool (below).
This Overview and Assessment has limited its focus to historic sites with documented archeological potential. As defined here, the measure of archeological potential is the capability of the physical remains at a site to yield information about the human activity that occurred there. For example, sites with identifiable features that can be mapped, such as structures, clusters of artifacts, caches, and trash scatters, lend themselves to reconstruction of site activities.

With respect to archeological potential, not all cultural resources are created equal. Theoretically, the faintest shred of human material culture has archeological potential; even an isolated tin can or a scrap of decaying tent canvas blowing across the tundra is tangible evidence of a human presence in the wilderness. Such items are part of the archeological record and definitely worth recording. Archeologists are often able to weave even mundane bits of information together with a meaningful result. For example, a study of all the isolated tin cans in one area may one day be able to substantiate (or challenge) a proposed chronology for the area's historic occupation or reveal patterns of food consumption. But viewed alone, a single tin can removed from its cultural context possesses little potential for reconstructing past human activity or addressing anthropological research problems.

It is necessary to specify that archeological potential be documented for practical reasons. In most cases archeological potential cannot be assumed. It must be assessed, based on first-hand observation of the site, and this type of documentation simply does not exist for all the known sites in the park. Historic sites in particular often lack assessments of archeological potential. This may be due to basic differences in the ways historic and prehistoric sites are recorded. Archeological surveys are usually designed to locate prehistoric sites and use the site information to address prehistoric research needs. The located sites are investigated (mapped, measured, photographed, inventoried, tested, analyzed) according to the standards and needs of the research design and the resulting observations are used to assess archeological potential. While exceptions exist, like the ongoing Cultural Resource Mining Inventory and Monitoring (CRMIM) program in Denali, historic sites have not been as likely to be the focus of planned field survey. In some cases, even very significant historic sites are known only through the written record or oral history. Without verification of physical remains, the assessment of archeological potential is impossible. Historic sites encountered during prehistoric surveys are usually recorded as sites, but as they do not meet the needs of the research design, analysis and assessment of archeological potential tends to be overlooked. This is also often the case with historic sites and structures recorded during architectural surveys, such as the HABS/HAER program, which focus on the historically or architecturally interesting attributes of the site, but may ignore archeologically valuable attributes such as a trash scatter or the faint ruins of outbuildings.

DENA's 104 known historic sites represent 55% of all recorded cultural sites. As a group, the historic sites are essentially evenly divided between mining sites (51 sites)
and other historic sites (53 sites). The mining sites have been grouped according to the CRMIM Historic Mining Sites Typology, a site classification system based on specific functional site attributes recorded during the field phase of the project (this system is still being refined and will be described in detail in the forthcoming CRMIM program report). Although most of the mining sites recorded prior to the CRMIM program lack the detail needed for precise archeological classification, they also have been described according to the CRMIM classification system; site type/function for these sites should be considered preliminary.

Sites have been classified as mining-related only when mining was an exclusive or specialized activity; subsequent research could reveal that additional sites are related to mining activity. Classification of the Other Historic sites is less functionally precise than for the mining sites, reflecting the mining-biased pattern of historical archeological research in DENA. Certainly the very large General Habitation Site category needs to be broken down into more functionally specific site types. The list below identifies only the broadest level of site classification; for more refined information (mining methods, specific features, etc.) refer to Table 5 (Appendix A).

Table 2. Historic Site Types

<table>
<thead>
<tr>
<th>Site Type</th>
<th>Number of Sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placer Mining Camp:</td>
<td>12 sites</td>
</tr>
<tr>
<td>Lode Mining Camp:</td>
<td>2 sites</td>
</tr>
<tr>
<td>Placer Mining Operation:</td>
<td>10 sites</td>
</tr>
<tr>
<td>Lode Mining Operation:</td>
<td>8 sites</td>
</tr>
<tr>
<td>Placer Mining Camp/Operation:</td>
<td>4 sites</td>
</tr>
<tr>
<td>Lode Mining Camp/Operation:</td>
<td>7 sites</td>
</tr>
<tr>
<td>Mining Community:</td>
<td>5 sites</td>
</tr>
<tr>
<td>Placer Mining Equipment:</td>
<td>3 sites</td>
</tr>
<tr>
<td>General Habitation Site:</td>
<td>39 sites</td>
</tr>
<tr>
<td>Transportation Site:</td>
<td>5 sites</td>
</tr>
<tr>
<td>Cairn (markers):</td>
<td>3 sites</td>
</tr>
<tr>
<td>Gravesite:</td>
<td>3 sites</td>
</tr>
<tr>
<td>Native Community:</td>
<td>1 site</td>
</tr>
<tr>
<td>Resource Extraction Site:</td>
<td>2 sites</td>
</tr>
</tbody>
</table>

Total: 104 sites
Historic Site Type Definitions

Most of the following definitions have been taken from the Historic Mining Site Typology that has been developed by the CRMIM program; this typology is presently in draft form.

**Placer Mining Camp:** A habitation site that is associated with placer mining activity, but is functionally and spatially distinct from the actual placer mining operation. In addition to domestic activities, site functions include maintenance and support of the mining operation(s), as indicated by blacksmith’s shops and equipment, barns, storage sheds, and/or stored specialized (placer mining) and general-use equipment. Recorded sites: MMK-017, MMK-020, MMK-040, MMK-044, MMK-049, MMK-051, MMK-053, MMK-055, MMK-062, MMK-063, MMK-086, MMK-114.

**Lode Mining Camp:** A habitation site associated with lode mining activity, that is functionally and spatially distinct from the actual mining or milling operation. In addition to domestic activities, site functions include maintenance and support activities associated with the mining operation. Recorded sites: HEA-229, MMK-089.

**Placer Mining Operation:** An area, spatially distinct from a camp or habitation, at which placer deposits are worked and the physical remains of placer mining activities (prospecting, excavation, transportation and/or concentration of gold-bearing gravels) are present and in place. Tools, equipment, structures, and engineering features (water diversion and supply systems) associated with specific placer mining activities may be present. Characteristic landscape modifications include tailings piles, mining pits, stone dry walls, and bedrock channels. Recorded sites: HEA-262, MMK-019, MMK-039, MMK-041, MMK-042, MMK-043, MMK-045, MMK-048, MMK-054, MMK-057.

**Lode Mining Operation:** An area where components associated with lode mining process are present and in place. The range of possible processes includes prospecting and exploration, extraction, transportation, milling or concentrating, or combinations of the above. This site type is spatially distinct from a definable camp or habitation area. Characteristic elements and features include specialized tools, equipment and structures associated with lode mining processes and essential engineering elements, such as water diversion and supply systems (these often extend a considerable distance from the central site area). Observable landscape modifications include spoil piles, tailings, trenches, cuts, shafts, adits and areas of subsidence. Recorded sites: HEA-227, HEA-231, MMK-016, MMK-022,
MMK-077, MMK-079, MMK-080, MMK-090.

Placer Mining Camp/Operation: A site that contains the components of both placer mining camps and placer mining operations. Recorded sites: MMK-023, MMK-052.

Lode Mining Camp/Operation: A site that contains the components of both lode mining camps and lode mining operations. Recorded sites: HEA-228, MMK-046, MMK-061, MMK-081, MMK-082, MMK-091, and MMK-092.

Placer Mining Equipment: Specialized placer mining equipment (equipment generally used at the point of excavation and extraction) that is out of context and cannot be linked to an operation or camp. Recorded sites: HEA-107 (sluicing equipment), MMK-070 (surface-mining scoop).

Mining Community: Communities are group habitation sites that take on specialized social or communal tasks in addition to their basic function; providing shelter. Mining communities are communities that came into existence for the sole purpose of mining and are, in turn, supported entirely by mining activity. Specialized functions include transportation, communication and supply networks related to mining. Recorded sites: Diamond City (MMK-001), Kantishna/Eureka (MMK-002 and MMK-099), Glacier City (MMK-003), and Roosevelt (MMK-021).

General Habitation Site: This category is a catch-all grouping of a wide variety of sites that share domestic habitation, either temporary or permanent, as the primary site function. This group includes cabins, cabin ruins, cabin groups, roadhouses, a mountaineering base camp and a fish-camp. It also includes less clearly habitation-related features, such as caches, trash scatters, and doghouses, where such features are presumed to have been associated with habitation. Habitation sites are considered distinct from communities, which often take on specialized social or communal tasks in addition to their basic function; providing shelter. Recorded sites: HEA-059, HEA-094, HEA-108, HEA-132, HEA-134, HEA-215, HEA-216, HEA-217, HEA-218, HEA-219, HEA-220, HEA-221, HEA-222, HEA-223, HEA-224, MMK-018, MMK-025, MMK-058, MMK-059, MMK-064, MMK-067, MMK-084, MMK-085, MMK-094, MMK-100, MMK-115, MOMC-79-003, DENA-81-009, DENA-81-009, DENA-81-012, DENA-82-017, DENA-82-018, DENA-82-019, DENA-82-027, DENA-83-004, DENA-84-005, DENA-84-006, DENA-84-007, DENA-84-008.

Transportation Site: Sites related to the transportation of people, supplies or equipment. Examples include trails, bridges and equipment.
(vehicles/parts of vehicles). This category does not include transportation sites related to mining. Recorded sites: HEA-091/MMK-095, HEA-230, MMK-047, and DENA-81-011.

Cairn (markers): Man-made piles of stones or boulders thought to have functioned as monuments or markers (perhaps for navigation or boundary-marking purposes). As a group, these features do not have a consistent or defined shape or size. Although these sites have been classified as historic sites, there are prehistoric or ethnographic cairns. The examples included here, however, do not appear to be human burial cairns. Recorded sites: HEA-135, MMK-024, MMK-038.

Gravesite: Marked graves associate with the historic period. Recorded gravesites: MMK-083, DENA-81-005, and DENA-81-007.

Native Community: A group habitation site inhabited by indigenous peoples. Communities differ from habitation sites in that they often take on specialized social or communal tasks in addition to their basic function; providing shelter. There is only one Native Community recorded as a site in DENA; Birch Creek Village (MMK-021). This site has persisted from prehistoric times.

Resource Extraction Site: Sites which exist primarily for intensive, single-purpose resource extraction (other than mining). Recorded sites: MMK-093 (logging and sawmilling operation), and MMK-011, (fish camp).

As with prehistoric remains, historic isolates are a common type of cultural resource in DENA. Unlike prehistoric isolated finds however, historic isolates generally have not been recorded as sites (thus they have not been included in the historic site totals). While isolates are not assigned AHRS site numbers, the CRMIM program does track isolates, preparing less detailed documentation and assigning isolate numbers. It is anticipated that many of the isolates will be incorporated into surrounding sites as analysis progresses.

The DENA curatorial collection includes 6,390 items held in park archives (reference and research collections, field notes, photographs, papers, maps, reports, etc.) as well as 2,660 historical artifacts. Artifact categories are shown here in alphabetical order, with the number of individual items shown in parentheses:

- Act, Congressional (6)
- Affidavit (1)
- Award (1)
- Album (8)
- Awl (1)
Ax (2)
Bag (2)
Bag, sleeping (1)
Balance (1)
Basin (1)
Bill (1)
Binoculars (1)
Bit (3)
Blueprint (13)
Board, drying (3)
Book (82)
Booklet (26)
Bookplate (1)
Boot, ski (2)
Bottle (3)
Bowl (12)
Box, balance (1)
Briefcase (1)
Bulletin (1)
Bumper sticker (1)
Button (1)
Camera case (1)
Camera (1)
Can (11)
Canteen (2)
Cartridge (7)
Case, lantern-slide (2)
Certificate, authenticity (1)
Chain, choker (1)
Chisel (1)
Clutch (1)
Coffeepot (3)
Collage, photographic (1)
Contract (1)
Coveralls (1)
Crampons (3)
Crate (1)
Cup (7)
Currency (1)
Diary (2)
Dog, log (1)
Drawing (19)
Envelope (3)
File (1)

95
Film, motion picture (41)
Filter (1)
Fork (1)
Fuse (1)
Grinder, meat (1)
Hame (4)
Handkerchief (1)
Holder (4)
Insulator (16)
Inventory (1)
Jar (2)
Ladle (1)
Lantern, railroad (1)
Latch (1)
Leaflet (1)
Letter (11)
Lid (1)
Lighter (1)
Magazine (7)
Manuscript (3)
Map (24)
Memorandum (8)
Mirror (1)
Nail (1)
Negative, film (305)
Newspaper (260)
Note (1)
Notice (4)
Opener (1)
Pack Frame (2)
Painting (2)
Pan (3)
Parka (1)
Patch, regimental (2)
Pen (1)
Pick (2)
Picture frame (2)
Piton (1)
Plate (3)
Platter (1)
Polish, stove (1)
Portfolio, photographic (1)
Postcard (7)
Print, photographic (1,305)
Problematical (6)
Proclamation (2)
Receipt (1)
Register (7)
Report (85)
Ring, napkin (1)
Rope (1)
Rubber (1)
Saddle pack (1)
Saucepan (6)
Saucer (8)
Saw (2)
Scale, balance (1)
Scoop, feed (1)
Scrapbook (2)
Shell, shotgun (3)
Sherd, base (1)
Shovel (1)
Sign (3)
Ski pole (2)
Ski pole basket (1)
Ski (5)
Sled (1)
Snare (1)
Snowshoe (8)
Spade, garden (1)
Speech (3)
Spike (1)
Spoon (1)
Statement (1)
Stationary (1)
Still (1)
Stool (1)
Stove (2)
Stretching machine (1)
Tape (9)
Telegram (2)
Telephone (1)
Telescope mount (1)
Tent (7)
Thermometer (2)
Tin (1)
Topographic model (1)
Tractor (1)
Transparency, slide (60)
Tube (2)
Wheel (1)
Figure 9. Distribution of Known Historic Sites
Information is the most basic cultural resource management tool; the archeologist requires information in order to analyze and make assessments, and the manager requires information in order to determine protection, preservation, and interpretation needs. Review of the existing data has highlighted critical problems in the ability of DENA's archeological database to provide managers and researchers with information. A recurring theme has been the need to improve the quality, consistency, and accessibility of the existing DENA archeological database. The following discussion addresses these problems, and provides some initial recommendations for dealing with them.

**Improving the Quality and Consistency of the Database**

As used here, quality and consistency are characteristics that influence the reliability, accuracy and degree of detail inherent in archeological data. Within DENA, these properties have been influenced by the limited nature of the archeological deposits themselves, as well as certain problems relating to the collection and management of archeological data.

**The Limitations of the Archeological Record**

The strength of the "archaeological presence" at a given site is influenced by many factors, including the type and intensity of activity that occurred and the physical properties of the site environment. Surface lithic deposits, presently the most commonly occurring site type in DENA, are notoriously difficult to evaluate. Many surface lithic deposits are presumed to be temporary hunting camps of Alaska's hunter-gatherer groups. When compared to more population-dense or sedentary groups, these camps leave a faint mark upon the landscape, perhaps consisting of the materials of a small group during a single visit. Even when site activity is more intensive or long-term, the often thin soils of the Interior offer poor preservation of organic materials and are susceptible to disturbance by freezing and thawing (cryoturbation) and the burrowing and digging of animals (bears and rodents). Most of these sites are essentially un-datable and contain few, if any, diagnostic tools. Stratified deposits that are well-suited to excavation occur, for the most part, only in special settings and situations. Without such deposits, archeologists must work without an intact datable, context; the fundamental interpretive tool of their trade.

These problems do not mean that surface lithic deposits lack research value. Several sources have discussed their importance in determining a full range of prehistoric activities (Talmadge and Chesler 1977). Others have focused on the ability of small, single component sites to provide "clean", un-mixed assemblages that can only result
from a single, specific site function or period of occupation (Hall 1982). While such deposits may provide the best setting for recovering functionally specific information, they obviously cannot be investigated by typical archeological methods (excavation) and possess several additional inherent difficulties:

(1) If such sites are of any antiquity they usually produce only lithic material.

(2) Usually such sites can only be dated through artifact comparison with cultural manifestations of known age.

(3) The exposed nature of such sites often leads to artifact loss if the sites are discovered by individuals unaware of their scientific importance.

(4) The exposed nature of such sites leads to artifact displacement, through various causes, resulting in a pattern not truly reflective of the behavior that produced the site.

(5) Such sites can be difficult to locate [Hall 1982:13].

In DENA, information recorded for surface lithic deposits is usually limited to basic location information and generalizations about observed tools. Future research should focus on ways to increase evaluation and interpretation.

One example is the effort by Bureau of Land Management archeologists to refine National Register Significance for the Tangle Lakes Archeological District, an area that contains hundreds of known surface lithic deposits, many of which are poorly documented. Archeologists are taking a more regional approach, and concentrating on identifying the settlement and land use pattern of the entire area. Then, in the same way that individual tiles fit together to form an intricate mosaic, the sites are evaluated for their contribution to the overall pattern of intensive, repeated use of an area.

More intensive investigation of surface sites could incorporate a detailed surface mapping program with computer analysis of the spatial relationships between artifacts and features (clusters). In keeping with the conservation ideal embraced by the National Park Service, such a program might include extensive on-site analysis of a valid statistical sample of the lithic material at the site. Very detailed lithic analysis of wear patterns and tool types found at a site may eventually lead to functional or temporal interpretations. Conducting analysis of the materials in situ would allow the collection of data without destroying site integrity. A small number of selected artifacts could be collected for off-site analysis, perhaps including obsidian hydration and residue analysis. One recent study has shown that blood residues on some prehistoric stone tools can successfully be used for dating (Nelson 1986). Another possibility is tracing the distribution of indigenous lithic materials through comparison with other
archaeological collections. In areas that also possess thin subsurface deposits, perhaps investigation could include limited testing, primarily focused on the collection of samples for later analysis, including microscopic analysis of sediments (pollen analysis, analysis of plant macrofossil and microfaunal remains).

Data Collection and Management Problems

Cultural reconstruction is the goal of modern archaeology. Most regional-level archaeological reconstruction, such as the identification of settlement and other cultural patterns, requires adequate and consistent baseline data from a representative sample of sites. Identified gaps in DENA's archaeological data, especially a lack of detail and an incomplete sample of recorded sites, impede efforts at cultural reconstruction. Major areas for improvement are archaeological documentation, development of historical archaeology, and intensive, analytical research.

Archaeological Documentation

The lack of consistent standards for recording archaeological data has been a major problem in DENA. Virtually all but the most recently recorded sites (those of the CRMIM program and the most recent compliance projects) are minimally documented in rough field notes. In some cases, description is limited to only three or four sentences. In many cases site maps were never prepared. Since no attempt was made to refine field observations for these sites, they lack coherent discussion of observed materials. A number of sites (mostly historic) never received permanent (AHRS) site numbers. In a few cases, locational information is so general that the sites probably could not be relocated today. The majority of sites have been documented at a level that is insufficient to evaluate National Register significance or place the site in any type of a research context. Each researcher or project has collected information appropriate to individual standards or specifications. As a result, the accuracy, level of detail and usefulness of the information is varied.

The best way to insure improvement in this area is to create a more standardized site recording system, with explicitly defined standards for documentation. Progress toward this goal has already been made through the efforts of the most recent research projects in DENA. The site files of the CRMIM program have proved particularly efficient and could function as a model for future projects. These files are built around a well-tested site form.

Carefully designed, standardized archaeological site forms are an necessary element of a useable archaeological database. They insure that essential data categories are not overlooked during field recording, promote consistency through the use of carefully defined terms and data categories, and encourage comparative analysis between sites or
Plate 6. Site Documentation: Inventorying historic artifacts (above) and creating a photographic record (below).
groups of sites through the use of comparable data categories. Forms also make it easier to retrieve and group information.

All archeological sites located or revisited during official NPS business should be recorded on site forms. Isolated finds, artifacts without accompanying cultural material, should also be recorded on forms. This responsibility should be shared by all cultural resource personnel dealing with archeological resources (Compliance, History, Survey and Research). The existence of other types of site documentation, such as field notes, memos, photographs, or descriptions in reports, does not replace the need for a completed site form for each site. Looking over a site in the field and suggesting that the site "needs to be documented" is not acceptable. It should not take repeated visits to a site to obtain adequate documentation. In most cases, revisits are inefficient, impractical and expensive.

Forms generated by specific projects will inevitably include site observations geared toward addressing their own research design, but certain minimum data requirements should be addressed. A suggested list of requirements, taken from NPS-28, could include:

- Park name and code
- Survey project title and year
- AHRS site number
- Legal description to quarter, quarter, quarter section and Universal Transverse Mercator (UTM) grid references
- Description of surface features and artifacts, subsurface deposits, and site surroundings necessary for determination of research potential and historic association
- All data required for the appropriate State inventory including, when possible, categorization by historical theme, period, cultural affiliation, settlement (functional) type, and any other interpretive site classification
- Accurate description of the site's condition, and any visible impacts on the site
- Sufficient data to relocate the site, monitor it's condition, measure adverse impacts, and budget and plan for treatment of the site (including description and explanation of site boundaries)
- A measured site plan (map) at a scale adequate for planning site
treatment and testing

A clear description of the survey method employed

Quantification of some type is essential for all of these observations, even if only estimates are possible. It is also helpful to give an indication of how the estimate was made. When determinations of cultural affiliation, chronology or site function are recorded it is essential that the basis of the determination also be recorded.

A minimum set of first-hand observations pertaining to each site's environmental setting should be identified prior to fieldwork and recorded for each site. Recording certain environmental variables (vegetation, slope, aspect) will be enhanced in terms of detail and consistency by incorporating data from the National Park Service's Geographic Information System (GIS). GIS data for DENA is expected to be available within the next three to four years. Researchers should explore the potential for applying GIS data to archeological research and, if possible, incorporate it into their research designs.

Documenting sites so that they can be relocated is a major problem in wilderness settings. Locational information should be as precise as possible, preferably to the 1/4-1/4-1/4 section, and include accurate Universal Transverse Mercator (UTM) grid designations. Attaching a Xerox copy of the pertinent USGS map quadrangle showing both the map reference and the site location is a good idea, both as a quick reference and as a check against recording errors. It is beneficial to plot adjacent sites as well. The use of air photos to record site locations is very successful recording technique, provided the information recorded on the photographs is duplicated elsewhere and the original photographs are adequately curated and cross-referenced in the site file.

Site forms are not complete without a site map. It is not necessary to have a formal topographic map; a sketch map with some approximation of scale which indicates distances between features can be sufficient. As with all maps, the first priority is to prepare a map that can be oriented, either to another map or to a permanent feature. The ideal site map would indicate or refer to (direction/distance to) a permanent feature appearing on a USGS topographic map. Site maps should include site boundaries, as well as the locations of surface features, artifacts, test units, and site datums.

If only one action is taken toward improving the database, it should be to retroactively prepare site files for those known sites that lack forms or written documentation (at present, adequate site forms exist only for the CRMIM sites). Ideally this would entail a field check of all inadequately-documented sites by a crew equipped to properly document the site on appropriate site forms. At minimum, site forms that consolidate the best available information should be prepared for each known site in the park. This should be done as soon as possible.
Historical Archeology

Considering the richness of DENA's history, the wealth of sites known to exist, and the potential for recovering data from those sites (as demonstrated by the CRMIM program), historical archeology should be a cornerstone of the park's cultural resource research plan. Instead, this field of research has been overlooked in favor of more clearly defined archeological and historical research needs, creating a major gap in DENA's archeological database. NPS historians, archeologists, anthropologists and DENA resource managers need to formulate specific research goals and management policies for dealing with these resources.

A major problem is the lack of defined contexts or themes for historical archeological research. Once a framework of research contexts and themes is established, surveys should be conducted to locate and evaluate sites for their potential to address specific research themes and topics. The abundant historical site information already gathered in DENA (such as the DENA Cabin Inventory, the CRMIM program, the Historic Resource Study) form a natural foundation for the framework of historic contexts.

Intensive, Analytical Research

Virtually the only type of archeological research conducted in DENA has been the archeological reconnaissance. According to NPS-28 and the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation (U.S. Department of the Interior 1983:44722), a reconnaissance level survey is intended to provide information for very generally characterizing a region's cultural resources. Such surveys are not intended to provide the final, "last word" documentation of individual sites. It is expected that areas examined at the reconnaissance level will require resurvey to obtain more complete information; they function appropriately as a first stage in a larger research plan.

Given these limitations, it is not reasonable to expect a preliminary investigation to lead to a conclusive archeological analysis, or, more importantly, to provide sufficient information for assessments of National Register significance, as mandated by Section 110 of the National Historic Preservation Act. There are certain exceptions to this rule. A deeply stratified prehistoric site with preservation of organic materials would be an exciting find in DENA; even without knowing the site's age or function, its locally unique composition and good potential for data recovery would make it significant without the support of additional information. But for the most part, more detail than is currently recorded at the reconnaissance level is needed to do a satisfactory job of analyzing or assessing a site's potential.

In many cases, the decision to use the reconnaissance level of inspection is based on funding rather than the objectives of the field work. This is understandable when
pioneering research in a new region because it is compatible with the "planning" objective of reconnaissance level research. In such cases all recorded observations are an advancement of knowledge and the results can be considered money well-spent. But in DENA for example, repeated reconnaissance level surveys have been conducted along the road corridor (Morgan, Treganza, Davis, compliance), in most cases without a predefined, analytical research motive. Such projects certainly add to the number of known sites, but, given the fact that analysis and conclusions rarely can be (or should be) drawn at this research level, the results usually fail to add to our understanding of prehistory. For example, if we already have 25 surface lithic deposits about which we know only the location and approximate number of flakes visible on the surface, there is limited value in duplicating the reconnaissance in order to recover identical information for 15 more surface lithic deposits in the same area. On the other hand, a more intensive survey, with a research design based on knowledge of the regional pattern and designed to carefully document and compare a set of very specific, predetermined attributes (perhaps number of tools, tool morphology, geographic setting, relationship to other sites, or relationship to resources), could provide some basis for analysis of an entire class of sites, and that would be of great value.

In other words, we already have an idea what type of site occurs most frequently in accessible portions of DENA; small, surface lithic deposits found on exposed knolls and ridge tops. This pattern is illustrated by the archeological record in DENA and duplicated in countless similar settings across the interior. The next step should be to advance our knowledge through more intensive, problem-oriented research, more environmentally diverse survey (stratified survey), and well-planned attempts at data recovery that will allow analysis and evaluation of a sample of sites.

Intensive, Stratified Survey. Past surveys have been keyed to areas with favorable access (the park road corridor), and particular management needs such as road compliance, mining compliance and land exchanges, rather than to areas relevant to archeological site discovery variables. As a result, a number of areas with good potential for prehistoric resources, such as major river terraces, have never been surveyed.

In order to obtain a representative impression of the archeological sites in DENA, an environmentally stratified archeological site survey should be conducted. Such a survey would attempt to investigate a more diverse sample settings than have presently been investigated. This survey should also be intensive, with the goal of recovering sufficient data to address the objectives of the research design and allow assessment of the National Register eligibility of recorded sites.

There are many types of supporting research that could help researchers formulate effective research designs and plan archeological surveys. Some possibilities include ethnohistorical and ethnogeographical research, paleoenvironmental reconstruction, and incorporating the remote sensing techniques described in the road corridor predictive...
model (Gudgel-Holmes and Holmes 1989).

Excavation. Perhaps the most needed type of research for evaluation is planned archeological excavation. Obviously, excavating stratified sites is not the answer to all analysis problems in DENA. First, although a number of stratified sites are presently known in DENA, they are comparatively few in number. This is partially due to the geomorphic characteristics of the region, but also reflects the fact that archeologists have not intentionally looked for settings that favor excavation. One exception is the 1988 land exchange survey in the Swift Fork area which targeted certain areas with potential to contain deep loess deposits. Although the survey was less successful than anticipated, this type of goal-directed research represents an advance in the level of research for DENA. Second, given the conservation-directed goals of the National Park Service, careful consideration must be given to the negative aspects of excavation. Archeological excavation is a destructive action and scientific need must be carefully weighed against loss of a non-renewable resource. Given our present level of knowledge of DENA archeology, however, it seems worthwhile to consider sacrificing a small part of the resource to develop an understanding of this potentially significant region.

Evaluating Archeological Resources. With the exception of the Teklanika sites, the sites recorded during the CRMIM program, and selected historic sites evaluated for their historic (rather than archeological) values, archeological properties in DENA have not been evaluated for their research or National Register significance. In many cases, sites have not been recorded in sufficient detail to permit evaluation. This is a problem because, as specified by the National Historic Preservation Act, federal agencies are responsible for evaluating the National Register eligibility of the historic properties in their care.

National Register eligibility is measured according to the four criteria outlined in 36 CFR part 800: Procedures for the Protection of Historic and Cultural Properties:

The quality of significance in American History, architecture, archeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, materials, workmanship, feeling and association, and:

(A) That are associated with events that have made a significant contribution to the broad patterns of history; or

(B) That are associated with the lives of persons significant in our past; or

(C) That embody the distinctive characteristics of a type, period, method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose
Plate 7. Loess deposits, Swift Fork area.
components may lack individual distinction; or

(D) That have yielded, or may be likely to yield, information important in prehistory or history.

While archeological resources may be relevant to any or all of these criteria, they most commonly are evaluated with respect criterion D, the potential to yield information important in prehistory or history, but archeologists should consider using any of the criteria. For example, a skillfully constructed hunting blind or caribou fence might fulfill criterion C, a site associated through oral history with an important Native American figure could fulfill criterion B.

Several archeologists have suggested that criterion D, used by itself, is too broad for meaningful discussions of significance, and that more case-specific rationales need to be provided. They suggest that perhaps the optimal use of this criterion would further tie significance to explicit, problem-oriented research designs, goals or contexts (King, Hickman and Berg 1977; Raab and Klinger 1977; Schiffer and Gumerman 1977:249). The National Register encourages such context-oriented research through the acceptance of Multiple Property Nominations. Such nominations identify and address contextual frameworks that provide a basis for evaluating the significance of a group of topically related sites in an area such as the park.

The formation of problem-oriented research designs is a vital part of meaningful archeological research. In fact, many researchers suggest that problem-oriented research is the only way significance can be assessed:

...archeological resources acquire scientific or historical significance only as they relate to specific research questions in substantive, technical, methodological, and theoretical contexts...that is, archeological resources are significant to the extent that their careful study might be expected to shed light on various current research questions in the several domains (House and Schiffer 1975:163).

Clearly, this type of research design provides more than a description of fieldwork methods and scheduling accompanied by a pre-field literature review. Researchers are encouraged to develop problem-oriented research contexts, using either the previously noted thematic framework, scientific questions, or other sources for ideas. Obviously the development of such contexts must be of a scale appropriate to the project at hand, but all projects benefit from a planned, clearly stated research goal.

The Secretary of the Interior's Standards and Guidelines outlines the elements that should be incorporated into research designs for all identification studies, including most archeological research. According to this outline, research designs should specify, at minimum:
Objectives of the identification activities. For example: to characterize the range of historic properties in a region; to identify the number of properties associated with a context; to gather information to determine which properties in an area are significant. The statement of objectives should refer to current knowledge about the historic contexts or property types, based on background research or assessments of previous research. It should clearly define the physical extent of the area to be investigated and the amounts and kinds of information to be gathered about properties in the area.

Methods to be used to obtain the information. For example: archival research or field survey. Research methods should be clearly and specifically related to research problems. Archival research or survey methods should be carefully explained so that others using the gathered information can understand how the information was obtained and what its possible limitations or biases are.

Expected results and the reasons for those expectations. Expectations about the kind, number, location, character and condition of historic properties are generally based on a combination of background research, proposed hypothesis, and analogy to the kinds of properties known to exist in areas of similar environment or history [Federal Register 1983 Vol. 48, No.190:44721].


One way that the National Park Service is attempting to encourage problem-oriented contexts for research is through the identification of a theme-based classification for research (U.S. Department of the Interior, National Park Service 1987). The thematic framework is not intended to replace individual research designs and questions or enforce "canned" federal research goals. Rather, themes offer several unifying contexts for grouping research of historic and archeological properties and addressing the extent that those properties reflect the Nation's past. In this way, the National Park Service can identify and pursue research topics that reinforce each other and also quantifiably assess the "representativeness" of the cultural resources in the National Park System. Guidance in establishing research contexts and using the thematic framework can be obtained from Preservation Planning: A Handbook of Technical Assistance Material for Cultural Resource Planning (U.S. Department of the Interior, National Park Service 1988b).

Unfortunately the NHL thematic framework for the historic period is not especially applicable for the historic period in Alaska. Most of the subthemes deal with time
periods or events, such as the colonization of America, that occurred prior to the historic period in Alaska. The DENA Historic Resource Study (Brown 1990) should prove helpful in identifying and developing research themes based upon DENA's history and historic resources.

Improving the Accessibility of the Database

Accessibility is as important as content when evaluating an archeological database. Three ways to improve the accessibility of DENA archeological data are improved archeological records management, development of the Cultural Sites Inventory, and greater distribution of information through archeological reports.

Archeological Records Management

All archeological research projects, however small, generate records. Depending on the project, these include project documentation (contract information, research design and methods, etc.), field documentation (field notes, site forms, photographs, maps, etc.), collections documentation, and conservation records. NPS-28 clearly considers archeological records tangible cultural resources and provides mandated standards for their management. Without proper management, this resource is neither accessible nor adequately protected for future generations.

Until recently, the overall handling of DENA's archeological data has been very casual; there has been no systematic or centralized filing of documents. This not only places the resource at risk (through loss or destruction), but also results in diminished efficiency in compiling and evaluating data. When preparing this Overview and Assessment, for example, obtaining even the simplest information, such as the number of sites recorded within park boundaries, was complicated by the need to search for, and through, a confusing maze of original field notes. Preparing the annotated site list (Appendix A) should have been a straightforward task. Instead, it was a tedious undertaking that took many weeks and involved piecing together numerous (often conflicting) sources, such as field notes, photographs, maps, and several indexes of site numbers.

Site forms, field notes and other supporting data should be kept in a centralized file at the Alaska Regional Office. Copies of site forms should automatically be routed to the park and the AHRS files. In the past, archeological site information tended to remain in the files of the individual who recorded the site. Site files are not proprietary information; they are archeological resources whose value lies in their ability to meet research and management needs, and, eventually, in their contribution to the research history of the park. In order to meet these needs they must be kept current, organized,
and readily accessible. An up-to-date, centralized site file system serves emergency as well as everyday management needs. This has been illustrated by recent resource emergencies, such as the Yellowstone fires or the Prince William Sound oil spill, which create the need for immediately accessible information. If such an emergency were to occur in DENA, managers would have great difficulty in accurately assessing actual or potential impact to cultural resource sites.

Improved records management should be given a high priority in DENA's archeological resource management plan. This need is sufficiently critical that it should supersede all others, including the need for additional survey.

The Cultural Sites Inventory

The National Park Service, in recognition of the fact that improved management of cultural resource data would benefit both researchers and managers, has developed a service-wide cultural resource information system known as the Cultural Sites Inventory (CSI). Although CSI is still in the prototype stage, progress is being made toward more efficient use and management of cultural resource data.

One of the first priorities of CSI was the creation of a computer-accessible information database. This element of CSI is known as the Archeological Resources Inventory (ARI). ARI computerized data processing has already been tested in the Alaska Region (YUCH, GAAR, BELA, and CAKR). At this initial level, data abstracted primarily from existing site forms, maps, and reports was coded onto computer-compatible data entry forms. Eventually, sources of data will be expanded to include other relevant data, such as references to reports and manuscripts, information filed at archives and museums, and records maintained by other government agencies.

Another goal of CSI is the development and implementation of an archival system for the actual "hard-copy" archeological records and data. At this stage, improved site files have primarily been a positive byproduct of the ARI data entry process, but eventually, CSI files will consolidate, in a systematic manner, data for all known cultural resource sites, including original site forms and site maps, field notes, site location maps (base maps), photographic records, aerial photos, data entry forms, relevant research reports or documents, and any other adjunct files and records. The original records will be maintained at the Regional Office, but copies will be prepared for each park.

The CSI system has the potential to dramatically improve the way data is collected and managed, and to make it more accessible. Its implementation is much needed and worthy of the support of park and Regional office resource managers.
Archeological Research Reports

Another way to improve the accessibility of archeological data is the distribution of research reports. Although it may not be feasible to prepare a final report each time a small research or compliance project is conducted, there should be some compilation of the results of field research prepared annually. This report should summarize the goals, methods and results of all types of research conducted that season, including general compliance, mining compliance, historical archeology, and National Register programs. Sensitive information, such as detailed site locations, could easily be omitted.

Impacts to Archeological Resources

Natural Impacts

Archeological resources are susceptible to damage or destruction from a wide variety of natural actions. Natural threats include such physical processes as erosion, cryoturbation, chemical deterioration of artifacts, bioturbation, and deposition.

The biggest threat presented by erosion is the destruction or disturbance of archeological context. Since a major part of archeological research is the study of the relative position of artifacts or objects within a site, anything that causes artifacts or objects to move or become separated from their original context is extremely destructive. Although both historic and prehistoric resources are subject to erosion, the shallow or surface prehistoric sites that are the most common site type in DENA are particularly vulnerable. Wind, water, and down-slope movement all play a role in the erosion of archeological deposits. Many of DENA's recorded prehistoric sites occur in areas with wind-deflated soils (blowouts). While erosion is a serious threat, it also commonly leads to the discovery of archeological remains. The Teklanika sites, described as suffering from erosion at the time of their discovery, are a classic example:

Both sites were discovered because processes of denudation and erosion had removed overlying soil and exposed material at the surface. . .Slope wash from Teklanika West undoubtedly has accounted for the loss of some material at that site (West 1965:8).

Cryoturbation, the disturbance of sediments through the freeze-thaw cycle (including frost boiling, frost heaving and solifluction), is a significant site impact. Subarctic researchers have attempted to assess and predict the effects of cryoturbation in archeological sites (Bowers et al. 1983), but these research efforts are influenced by many variables and should be considered hypothetical.
Chemical destruction, the dissolution and decay of artifacts and objects, results from the interaction of complex site environment variables, including climate, flora, and pedology. Physical destruction occurs when the associations between artifacts and objects are disturbed or destroyed. Because the relationship between archeological materials may yield the most important information about a site, the destruction of that association severely limits interpretation.

Deposition may not destroy sites, but can cover them, making them difficult to identify. Deeply buried sites may then become more subject to destruction due to an unawareness of their presence. Erosion and ice scouring along major rivers has an obviously negative impact on cultural deposits.

Obviously wooden historic structures and other burnable historic features are extremely vulnerable to fire. The effect of fire on prehistoric archeological materials is less clear, although it can be assumed that destructive impacts would be greatest for shallow or surface deposits. Heat fracturing of lithic materials and contamination of potential radiocarbon dates are potential impacts, especially when the pre-fire fuel load is high and the vegetation mat is thin and dry. Depending on the vegetation cover, intense fires may make archeological sites more easily identifiable during survey by removing brush that obscures the ground surface. For both historic and prehistoric resources, probably the most likely source of fire-related damage is from fire fighting and cleanup activities, particularly when heavy, mechanized equipment is used.

Human Impacts

Human impacts to archeological sites can stem from a number of different actions. Impacts can result from such planned activities as mining, construction and development, or from unintentional activities, such as unauthorized artifact collecting (pothunting) or detonation of explosives. Repeated camping and relatively low-density recreational use almost certainly cause inadvertent damage to archeological deposits, particularly in areas where sites are surface deposits. Whatever the reason, removing an artifact from its original context is essentially destructive; without careful planning and restraint, even the testing and surface collecting that archeologists engage can be an adverse impact.

Unfortunately, there is very little specific information about impact to DENA’s archeological sites. Natural impacts, especially wind-generated erosion and the effects of the freeze-thaw cycle, are probably the most pervasive in DENA, given the harshness of the environment and the fact that most of the historic and prehistoric archeological sites are on, or above, ground. As in any area with a human population, archeologists have also noted instances of man-made disturbance, primarily artifact collecting. The extent of such collecting is extremely difficult to quantify. Examples include numerous reports of collected prehistoric tools and finding piles of lithic artifacts stacked up in
prehistoric sites. For historic sites, the presence of the kind of portable historic materials that collectors find attractive, such as dynamite boxes, tools or hardware associated with mining, makes collecting a certainty. Possibly a larger preservation problem for early historic mining sites is the efficiency with which miners in remote areas traditionally recycle raw material; old structures (down to the nails and scraps of milled lumber) and equipment are, as they were in the past, moved, redesigned and/or incorporated into new construction. The only way to begin to assess the problem of collecting in DENA is to consistently include a detailed discussion of site condition when recording and revisiting sites. In areas that receive the greatest visitation, such as campgrounds and the road corridor, a systematic monitoring program, even of a small sample of sites, could result in a better understanding of the nature and extent of the problem.

The Teklanika sites are one example of a highly significant archeological resource that is known to be impacted by erosion. Natural erosion, as well as erosion from foot traffic through the site and in slumping excavation units, is ongoing. The erosion is also suspected of leading to artifact collecting, as erosion makes artifacts visible on the surface. This problem has been addressed in the Recommendations section.
RECOMMENDATIONS

Problem Statement:

This Overview and Assessment has given a great deal of attention to the need for improved handling of archeological data in DENA. I feel that this problem is sufficiently critical to justify listing it as a first priority. Archeological records and data are a collection; they are no less important than collections of artifacts or natural history specimens. To conduct archeological survey without providing for basic management of the resulting data is as unthinkable as amassing large collections of artifacts without considering the cost, feasibility and practicality of analyzing and curating the collection.

Recommendation: Create an efficient system for creating and managing site files. This system should reflect the input, at minimum, of the Regional Curator, the Regional Archeologist, the Regional CSI coordinator, and the park.

Recommendation: Immediately create centralized "master" hard files for all known sites in DENA. These files should consist of appropriate site data (site forms, field notes, site maps, survey reports, site assessments, site photographs, air photographs) for each archeological site in DENA. Also needed is a consistent policy determining which historic sites qualify for archeological documentation. Although this task logically could come under the direction of the Alaska Region's CSI coordinator, it should not be held up by the unfortunately uncertain funding and scheduling of the CSI program. The budget for creating and managing a centralized filing system (including a permanent position as well as material support) could be jointly funded by all of the cultural resource programs that collect resource data, and would benefit from an improved system; Compliance, CRMIM, Survey and Research, and History.

Problem statement:

In spite of their status as possibly the most important archeological sites in the park, both Teklanika sites have been known for some time to be impacted by erosion. Suspected vandalism, through unauthorized artifact collecting, is another site protection problem. Main sources of erosion are foot traffic along a trail and natural erosion accelerated by slumping and the lack of vegetation in the (never properly back-filled) excavation units. The vandalism is thought to be limited to individuals picking up artifacts that become visible through erosion. Although surface collecting seems less destructive than active digging by collectors, it still is highly damaging to the resource.
Furthermore, the vandalism problem will only intensify as the area gains a reputation as an easy-to-access and productive place to look for artifacts.

Recommendation: The Regional Archeologist has prepared a Development/Study Package Proposal for site stabilization at Teklanika. The stabilization should be implemented as soon as possible. Stabilization would include cleaning and squaring exposed excavation walls, filling the open excavation areas with imported fill, and possibly a revegetation program.

Problem Statement:

The Teklanika sites, through their role in defining the Denali complex, have made an important contribution to the early prehistory of Alaska. The excavation conducted at the site was not problem-free however, and a number of questions have never been resolved. Among the major problems are the age of the site (differing dates have been suggested), the horizontal extent of the site (an adequate site map was never completed), and clarification of the site stratigraphy (single or multiple components).

Recommendation: Map the site, to establish site boundaries and identify excavated, disturbed, and intact areas.

Recommendation: Conduct excavation to recover diagnostic artifacts, define stratigraphy, and obtain bone and/or charcoal for radiometric dating.

Problem Statement:

Each year, backcountry rangers and a diversity of researchers in non-cultural fields are active throughout the park. Although these individuals are a potential valuable source of information, there has been no way to consistently record or relate this information to archeologists. A yearly cultural resource orientation, which focused on the field identification, description and protection of DENA's cultural resources, would be very beneficial. Field observations could include monitoring ongoing impacts to known sites as well as directing archeologists to previously unknown sites or use areas. A major benefit of this instruction would be an overall increased sensitivity to cultural resources. This could minimize unintentional impact to archeological resources, which can occur when untrained personnel, in an effort to be helpful, disturb or collect interesting specimens for later identification. If such a training program was expanded to include all staff with regular contact with park visitors (especially rangers and interpreters), it would also provide the staff with the ability to more effectively answer questions about DENA's cultural resources and educate the public about conservation.
Recommendation: Design a training program and brief recording form for non-
archeologists providing instruction in identifying and describing cultural
resources. This program should provide background information to share with
park visitors and emphasize protection and preservation of cultural resources.

Problem Statement:

Archeological research in DENA has consisted of limited reconnaissance survey and
compliance actions in selected development areas. As a result, it is unlikely that the full
range of sites is known. Existing site locations, for example, probably reflect access and
development patterns rather than cultural patterns, such as settlement and subsistence.
A stratified archeological survey, a survey which samples a number of carefully selected
geographic features or sub-units, could lead to a more accurate representation of
DENA's prehistoric and historic cultural patterns.

Recommendation: Design and implement a stratified archeological survey in
DENA. Strata could be delineated according to variables identified by existing
biological, geological, geoarcheological, ethnographic, historical, and
archeological research. One example might be the geographic sub-units
identified by the park staff for other resource management research project.
Another possibility is use of the NPS Geographic Information System (once that
system is active for DENA).

Problem Statement:

Although DENA's archeological sites face a variety of threats, it is difficult to assess the
extent to which these impacts are occurring. This kind of information would be an
important management tool for the park, enabling staff to identify areas particularly
prone to damage or loss and anticipate the need for site protection.

Recommendation: Require assessments of site condition when recording new
sites or revisiting previously recorded sites. Unless the terms are carefully
defined in advance, subjective assessments (such as good, fair, poor condition)
are of little value. Descriptions should include as much narrative detail as
possible and some quantification of the impact (perhaps percentage of surface
area exposed by erosion or number of surface artifacts within a two meter radius
of the site datum).

Recommendation: Establish a yearly monitoring program for a sample of
prehistoric and historic sites in the park. This could begin with a selection of
sites in or near high impact areas (such as the road corridor, Kantishna, headquarters, and campgrounds).

Problem Statement:

The National Historic Preservation Act requires federal managers to inventory and evaluate the National Register significance of the historic properties under their jurisdiction. As noted in the Overview and Assessment, such evaluations generally require discussion of a site or group of sites within an analytical research context.

Recommendation: In order to provide the data necessary for National Register evaluations, researchers should develop and implement testable, problem oriented research designs. These research contexts would provide a basis for evaluating known (previously recorded), as well as newly recorded, sites.

Problem Statement:

The placement of archeological sites within a time frame is a major goal of archeology. With a few exceptions (Teklanika, certain historical sites), the lack of archeological detail such as dated deposits or diagnostic artifacts found in situ, it is not possible discuss the chronological placement of DENA's archeological sites.

Recommendation: Conduct research to identify target survey areas. The research design for this study could incorporate numerous site location models, including those of the North Alaska Range Project (Ten Brink 1984) and the predictive model of aboriginal site types along the road corridor (Gudgel-Holmes and Holmes 1989).

Recommendation: Conduct archeological testing at selected sites with potential to provide dates; either through the recovery of organic materials (bone, charcoal) for radiometric dating, or through relative dating (association with dated volcanic tephra deposits known to occur in the park).

Recommendation: Conduct archeological excavation. In addition to resolving key questions about Teklanika through supplemental excavation (noted above), the Hogan Creek site (HEA-152) is a site with potential to provide datable material (bone and charcoal) in a stratified context. At present the site is inadequately documented. Improved documentation with limited testing is recommended.
Problem Statement:

Theme-based research has been identified as an effective way to promote evaluation and interpretation of DENA's archeological sites.

Recommendation: Develop thematic contexts for research and site evaluation. The NHL program (USDI 1987), has proposed such a thematic research framework. Some potentially relevant sub-themes from the NHL framework are listed below. Each subtheme is followed by a number of more specific "topical facets".

The Earliest Inhabitants
- The Early Peopling of North America
- Archaic Adaptations of the Subarctic
- Archaic Adaptations in Montane Regions
- Early Man and Late Pleistocene Adaptations
- Human Factors in Pleistocene Faunal Extinctions
- The Big Game Hunters
- Human Osteological Evidence of Early Inhabitants

Post-Archaic and Pre-Contact Developments
- Subarctic Hunters and Gatherers
- Post-Archaic Adaptations
- Post-Archaic Adaptations in Montane Regions
- Physical Anthropology; American Indian, Eskimo

Prehistoric Archeology
- Prehistoric Architecture, shelter and Housing
- Prehistoric Technology
- Prehistoric Social and Political Organization
- Prehistoric diet/Health
- Prehistoric Warfare
- Prehistoric Religion, Ideology and Ceremonialism
- Prehistoric Settlements and Settlement Patterns
- Prehistoric Transportation and Travel
- Prehistoric Cultural Change
- Major Contributions to Culture Histories
- Paleoecology

Ethnohistory
- Native cultural Adaptations at Contact
- Establishing Intercultural Relations
- Varieties of Early Conflict, Conquest, or Accommodation
- The Myth of the Vanishing Native
Historic Period (modified from the NHL framework)
- Russian Exploration and Settlement
- Mining and its Role in the Expanding Frontier
- Transportation and its Role in the Expanding Frontier
- Subsistence in the Frontier
- Modern Technology Adapts to the Frontier
- Growth of the American Recreation Movement

Problem Statement:

On a more locally relevant level, future archeological research would be most effective if focused in certain basic areas.

Recommendation: Some specific research questions, which could be incorporated into research designs, include:

Prehistoric Chronology
1. What time periods are found in the park?
2. Do sites associated with certain time periods occur in specific areas?
3. Do sites associated with different time periods occur in different topographic settings?
4. Based on site distribution information, was the park used more intensively during certain periods?
5. As suggested for adjacent areas (Minchumina, Susitna), is there a definable coastal-influence present in the park?
6. What is the areal extent of the Susitna tephra sequence in the park? Can it effectively be used to date sites?

Local Prehistoric Settlement Patterns
1. What is the full range of prehistoric sites in DENA?
2. Does the local settlement pattern support that proposed for the Nenana Valley?
3. What effect did the Susitna volcanic ash falls have on prehistoric ecology and settlement?

Historical Archeology
1. What physical evidence exists for the activities of the Alaska Road Commission (engineering features, camps, etc.) and where can they be expected to occur?
2. What physical evidence exists for early historic trail/transportation systems in the park (including river boat landings, portages, early airfields)?
3. What is the full range of sites associated with mining in DENA?
4. What physical remains exist for the CCC era in DENA?

Problem Statement:

Very little is known about the archeological resources associated with the ethnographic period.

Recommendation: Conduct archeological survey to locate and evaluate ethnographic period sites in DENA. This research design should incorporate the information included within the Overview and Assessment, the road corridor predictive model (Gudgel-Holmes and Holmes 1989), and the results of the Kantishna place names study (Gudgel-Holmes 1990).
CONCLUSIONS

In terms of its archeological resources, Denali National Park and Preserve remains a relatively unknown area with promising potential. This potential is shown by the archeologically well-known areas surrounding the park, and by such characteristics as the persistence of ice-free areas within the park, a rich natural resource base, and its location within a culturally dynamic area.

The problems encountered during preparation of the Overview and Assessment, especially problems with the quality, consistency and accessibility of the existing archeological database, have limited the contribution that DENA's archeological resources have made to regional prehistory at this time. But with additional research, and the recommendations made here, it is hoped that archeological resources will become known as another of DENA's considerable riches.
GLOSSARY OF TECHNICAL TERMS AND CONCEPTS

Activity area:
A term used in archeology to describe the smallest observable component of a site; the site of an activity or event.

AD:
Abbreviation for Anno Domini; within the Christian Era.

Alluvium (alluvial):
Material deposited by rivers; the largest deposits of alluvium are flood plains and deltas. Build-up of alluvial material may occur where a river overflows its banks.

Amorphous:
Literally, without form; often refers to artifacts with a shape that is irregular or difficult to define. Also refers to the texture of rocks and minerals lacking definite crystalline structure.

Archeological resource:
All evidence of past human occupations. Such evidence includes sites, artifacts, and features and all other relevant information, including the contexts in which they occur. Archeological resources include material elements of both prehistoric and historic cultures.

Artifact:
Any object made, modified or used by man; may range from a coarse stone used to flake lithic material to a tool representing high technical accomplishment made from any material. Anything that exhibits physical attributes assumed to be the result of human activity.

Assemblage:
A set of objects found in association with each other and therefore assumed to belong to one phase and one group of people. An assemblage can be made up of many different types of objects and differs from an industry in that the latter describes a set of objects in one medium. Thus at a given site, an assemblage might include lithic, bone and shell artifacts but an industry might include just the lithic materials. An assemblage cannot be assumed to reflect the full range of artifacts available to a
particular group of people.

**Association:**
Objects are said to be in association when they are found together in a context that suggests they were deposited at the same time. For example, the objects found in a cache pit or on a house floor are considered associated. Associations between objects are the basis for relative dating.

**Babiche:**
Rawhide thong used in the manufacturing of many implements such as bow strings and snowshoe lacing.

**Band:**
A loosely structured group of related people occupying a single territory.

**Beamer:**
Two-handed hide scraper, usually made from a longitudinally split metapodial bone. Commonly found in Athapaskan sites (see illustration in Morlan 1973:301).

**Bedrock:**
The solid rock that underlies gravel, soil, or other superficial material. Also spelled bedrock.

**Beringia:**
The region that includes Western Alaska, Northeastern Siberia, and the shallow parts of the Bering and Chukchi Seas. This region is presumed to have been the avenue for human migrations between the Old and New Worlds.

**Biface:**
A lithic tool class defined by the presence of bifacial flaking along two converging surfaces of an edge of an artifact. Flaking can be either continuous or intermittent. The flaked surfaces must converge at least one point. The worked edges should facilitate cutting functions approximately parallel to the longitudinal axis. Includes projectile points and hafted and non-hafted knives.

**Bioturbation:**
Disturbance (burrowing, etc.) of sediments by animals or insects.

**Blade or blade-like flake:**
A long, thin relatively narrow flake with more or less parallel lateral edges. May be triangular or trapezoidal in cross-section. The length is equal to, or greater than, twice the width. Also see microblade.
Blade-core: 
The parent material from which blades are struck (removed). Typified by the presence of a large flat striking platform. The core shape can be pyramidal, cylindrical, or wedge-shaped. Blades are removed at right angles to the striking platform and the removal of one blade prepares the core for the removal of the next blade, producing a fluted appearance.

Bride Service: 
Practice of a potential groom working for his intended bride’s kin.

Burin: 
A chisel-like stone implement formed when a specialized flake has been removed parallel or roughly parallel to the long axis generally forming a right-angle edge on one or both margins. Can be modified by removal of other transverse or oblique burin spalls.

Burin spall: 
A specialized flake or blade removed from a burin core. The blade is thick in relation to its length and is usually triangular or rectangular in cross-section.

BC: 
Abbreviation for years before Christ; preceding the Christian era; 8,000 BC = 10,000 years ago.

BP: 
Abbreviation for years before present; 8,000 BP = 8,000 years ago.

Chert: 
A compact, siliceous rock with quartz particles that can be discerned either by the unaided eye or by magnification up to 14 times. Most varieties of chert are opaque, although some may be semitranslucent along thin edges. Variations in color and texture distinguish commonly used popular names for chert: jasper, flint, etc.

Cirque: 
A deep, steep-walled recess or hollow, horseshoe-shaped or semicircular in plan view, situated on the side of a mountain and produced by the erosive activity of a mountain glacier. A cirque glacier is a small glacier occupying a cirque. A cirque lake is a lake occupying a cirque.

Clan: 
A unilineal kinship group with each member claiming descent from a common fictional, remote ancestor usually legendary or mythological.
Component:
The manifestation of a given archeological focus at a specific site.

Context:
The spatial and chronological setting of an artifact or other element of a site; the relationship of the associated materials in a site.

Cordillera:
An extensive series of more or less parallel ranges of mountains including their associated valleys, basins, plains, plateaus, rivers, and lakes. Commonly used to describe the great mountain region of western North America (from the eastern face of the Rocky Mountains to the Pacific Ocean or the Andes in South America).

Core:
A lithic term for an object from which flakes have been removed and that exhibits numerous negative bulbs of applied force (also see blade, blade-core, microblade core).

Cross-cousins:
Cousins whose related parents are siblings of unlike sex. Offspring of a person’s mother’s brother or father’s sister.

Cross-cousin marriage:
Preferred marriage form where a man selects a spouse from either his mother’s brother’s daughter or his father’s sister’s daughter. Asymmetrical cross-cousin marriage is a form which restricts marriage to one or the other type of cross-cousin such as mother’s brother’s daughter, but not to father’s sister’s daughter.

Culture:
The learned behavior traits shared by the members of a society; a system of characteristic skills, language, art, beliefs etc. shared by a given people in a given time period.

Cryoturbation:
The disturbance of sediments by freezing and thawing. Includes frostheaving, frostboiling, and solifluction.

Cryptocrystalline (CCS):
Lithic material with crystals too small to be distinguished with the naked eye; indistinctly crystalline. This characteristic influences the flaking ability of lithic tool materials. Includes such materials as obsidian, chert, agate and jasper. Sometimes abbreviated as "CCS" (for cryptocrystalline silicate).
Cultural affiliation:
A known, projected, or hypothesized cultural, ethnic, or tribal group (e.g., Athapaskan, Eskimo, Aleut, Russian, European, etc.).

Cultural resources:
Districts, sites, structures, objects and evidence of importance to a culture, ethnic group or subculture. Cultural resources and relevant environmental data are important for describing and reconstructing past lifeways, for interpreting human behavior, and for predicting future courses of cultural development.

Culture history:
The chronological and spatial framework for describing the development of human societies and cultures, and the documented processes of cultural change involved in this development. Studies in culture history are primarily concerned with defining the geographic extent, relative age, and course of development of cultures.

Deadfall:
A type of trap that operates by dropping a weighted lever, rock, or ceiling on the victim when released by a trigger.

Debitage (or debris or detritus):
As pertains to the manufacture of stone tools, these terms describe the fragments of stone that are the byproducts of the flaking process; the material that results from either the manufacture or use of flaked lithic artifacts. Commonly known as flakes, waste flakes, or unmodified flakes.

Diffusion:
The process by which culture traits or elements spread from one culture to another, generally the result of contact.

Direct historic analogy:
Application of ethnographic information on cultural behavior and its material correlates to the interpretations of archeological remains. This approach is predicated on the assumption that, in some areas, there is a direct historical connection between archeological cultures and ethnographic cultures.

Direct historical approach:
The use of ethnographic data in the interpretation of archeological data especially in the correlation of historically known ethnic groups with archeological data; also used to describe the study of the processes of culture change.

Ecosystem:
An ecologic system, composed of organisms and their environment. The result of interaction between biological, geochemical, and geophysical systems.
Eolian:
Material deposited by the wind, such as loess or dune sand. This term may also describe wind generated erosion.

Ethnoarcheology:
The use of ethnographic data in the interpretation of archeological sites.

Ethnogeography:
The study of native place names for geographic features or places.

Ethnography:
The division of anthropology devoted to the descriptive recording of cultures; a descriptive anthropological study of a particular existing group.

Ethnographic resources:
Evidence of identifiable historic or protohistoric ethnic lifeways that may be used for describing, reconstructing, and interpreting cultural systems. These include sites, artifacts, ethnographic (written) records, informant interviews, photographs, environmental data, and all other relevant information.

Ethnohistory:
The use of written materials in preparing an ethnography; use of a people's oral literature in reconstructing their own history; use of historic data in the solution to anthropological problems; an anthropological study that focuses on historic or contemporary societies.

Esker:
A serpentine ridge of roughly stratified gravel and sand deposited by a stream flowing in or beneath the ice of a stagnant or retreating glacier and left behind when the ice melted. Length ranges from less than three to over 500 kilometers. Height ranges from three to over 300 meters.

Erosion:
The wearing away of soil and rock by weathering, mass wasting, rivers, streams, glaciers, waves, wind, and underground water.

Exogamy:
The practice of marriage outside a specific social group of which a person is a member, as required by custom or law.

culture or subculture.

FCR:
A common abbreviation for fire-cracked rock. This term describes otherwise unmodified rock that has been broken, cracked or altered (discolored, pitted) through exposure to
heat or fire. Fire-cracked rocks are not considered artifacts in the same sense as a formed tool, but in many cases they do represent physical evidence of human activity at a site. Many archeologists collect and analyze (weigh, map, count) fire-cracked rock as indicators of hearth activity and to identify specific activity areas within a site. In some contexts it can be difficult to separate naturally occurring fire-cracked rock (perhaps due to forest fires) from culturally fire-cracked rock. Other abbreviations include FBR (fire broken rock) and TAR (thermally altered rock).

**Flake:**
A removed piece of lithic material having the following characteristics:
   a) a regular (prepared core) to highly irregular (unprepared-core) outline
   b) evidence of a bulb of applied force (bulb of percussion);
   c) if the flake is whole, a platform or point of impact, bulb scar, conchoidal ripple marks and varied radial fracture lines.

**Flake:**
An object that has been formed or intentionally modified through the removal of one or more flakes.

**Feature:**
In archeological excavation, a non-portable cultural element of a site that is not classed as an individual artifact. Often a distinct association of cultural elements. Pits, concentrations of lithic debris, walls, floors, hearths, depressions, graves, postholes, are all features.

**Geoarcheology:**
The study of the relationship between prehistoric cultural deposits and their geological or geomorphological setting.

**Glaciation:**
The process by which land is covered by a glacier or ice-sheet or the period of time during which such covering occurred. The periods of colder weather that cause glacial formation are called glacialials, and intervening warmer periods are called interglacials. Landscapes covered by ice can be recognized by smoothed and/or abraded rock surfaces, U-shaped valleys carved by ice-sheets, and glacial drift or till (the rocky rubble carried and deposited by glaciers).

**Graver:**
A stone tool used to incise or form organic materials and soft stone. Gravers exhibit a distal end that is thick in cross-section and have a chisel-like edge, not unlike that of a burin (although not all chisels are manufactured through burin technology).

**Hammerstone:**
A stone object showing battering or pitting on one or more sides or ends; can be either
intentionally formed or a convenient utilization of natural form and material with no obvious manufacturing.

**Historical Archeology:**
The study of material associated with the historic period through archeological methods, with the goal of reconstructing and interpreting past events. These methods might include survey, testing or excavation, mapping, intra-site spatial analysis, surface collection, use wear analysis, residue analysis, and a variety of dating techniques.

**Illinoian Glaciation:**
The third of four Pleistocene glaciations in North America; Preceded the Wisconsin glaciation and correlates with the Riss glaciation in Europe (sometimes spelled Illinoisan).

**In Situ:**
Generally means found "in place"; in natural or original position.

**Intensive Archeological Survey:**
A comprehensive archeological field survey designed to recover detailed site information. Recovered information should be sufficiently detailed to permit assessment of the appearance, significance, integrity and boundaries of individual sites. Intensity can be influenced by the degree of ground coverage (how closely field workers are spaced or how many survey transects per areal unit) or the degree of detail recovered from individual sites.

**Kame:**
A mound or short irregular ridge, composed of stratified sand and gravel deposited by a subglacial stream as a fan or delta at the margin of a melting glacier; or deposited by a superglacial stream in a low place or hole on the surface of the glacier. An assemblage of kames might be called a kame complex, kame field or, if terrace-like or ridge-like, a kame terrace. Such features are commonly pitted with kettles and have an irregular surface.

**Kame and kettle topography:**
The uneven topography that results from various ice disintegration actions. Characterized by the presence of kames and kettles. Sometimes known as knob and kettle topography.

**Kettle:**
A depression in glacial drift, especially in outwash or in a kame field, formed by the melting of a detached block of stagnant ice that was buried in the drift. Kettles often contain lakes (kettle lakes) or swampy areas.
Loess:
Windblown glacial silt/dust; the product of glacial erosion redeposited by wind. In some locations massive loess deposits of several meters or more accumulate.

Macrocrystalline:
Rock with a crystalline structure distinctly visible to the unaided eye or with the use of a simple lens. Includes such materials as quartzite or granite.

Magic:
The control of supernatural forces by means of compulsive formulas.

Matrilateral:
Pertaining to descent that is reckoned through one's mother's brother.

Matrilineal descent:
Descent traced through the female line for purposes of group membership.

Matrilocal residence:
A pattern in which a man lives in the locality associated with his wife's relatives.

Megafauna:
Animals, living or fossil, that are large enough to be seen and studied with the unaided eye.

Microblade:
A specific type of small, thin blade with roughly parallel sides and a prepared proximal end. Commonly defined as having a width less than 10 millimeters (also see blade, blade-core).

Microblade core:
The prepared nucleus from which microblades were removed (also see core).

Midden:
A deposit of occupation debris, rubbish, or other by-products of human activity.

Moiety:
A group which results from a division of a society into two halves on the basis of descent.

Moraine:
A mound or ridge of unstratified glacial drift, chiefly till, deposited by direct action of glacier ice.
Myth:
A religious narrative which explains ultimate questions of human existence.

Occupation (cultural):
A discrete cluster of cultural material assumed to be the product of a single group of people at a particular locality and deposited over a period of continuous residence.

Palynology:
The study of pollen; pollen analysis.

Patination:
The chemical weathering of the outer surface of an artifact resulting in exterior differences in color, texture and substance. For example, chert often has a grey, white or bluish patina obscuring its natural color.

Phase:
An archeological temporal unit, defined by traits that distinguish it from all other units similarly conceived, whether of the same or other cultures or civilizations. Spatially limited to a relatively brief interval of time. A paradigmatic class of occupations defined by types and/or modes.

Polyandry:
The marriage custom of a woman having more than one husband simultaneously; a form of polygamy.

Polygamy:
Marriage to more than one spouse simultaneously.

Potlatch:
Institution of ceremonial feasting accompanied by lavish distribution of gifts.

Preform:
A shaped artifact blank that needs further modification to be completed. Has the basic shape or outline of the finished product, but cannot perform the functions of the ultimately intended tool.

Prehistory:
The time before the written record; studied through the material remains of past culture.

Quaternary era:
The most recent subdivision of geological time; includes both the Pleistocene and the Holocene.
Reconnaissance:
A relatively superficial and brief examination of representative portions of a project area, conducted for the purpose of defining the nature of the cultural resource base, determining general site types, and planning for future research. Test excavations may be conducted during a reconnaissance.

Research Design:
A plan for conducting an (archeological) investigation that is formulated prior to undertaking the research project, fieldwork or study. A research design includes a clear statement of the research problem, basic assumptions, activities and techniques for problem solution and hypothesis testing, and a specification of the relevant data and how they will be utilized for a full understanding of the resource. A research design should be sufficiently detailed to permit an evaluation of its methodological sophistication and feasibility.

Retouch:
The modification of a tool, after preliminary shaping, in order to refine or complete the tool. On a core-tool, retouch may consist of roughly trimming the edge by striking with a hammerstone, but on a smaller, finer flake or blade tools retouch usually consists of pressure-flaking. Also known as secondary flaking.

Ridge:
A general term for a long narrow elevation, usually sharp-crested and with steep sides.

Sampling:
The process or technique of selecting a part of a study area that is representative of the whole for inspection or analysis. Representativeness should be appropriate to the research problems under consideration. Sampling is utilized in archeological research both for recovering data from large study areas and individual sites. Sampling is commonly applied to both survey and excavation projects. The level of intensity depends upon the precision required of the investigative results.

Shaman:
A person who has special religious power received directly from supernatural sources; perhaps possesses certain special gifts such as healing or divination.

Social organization/structure:
Relationships that bind individuals together in a society; ways in which groups and individuals are organized and relate to one another.

Society:
A group of people occupying the same territory, speaking the same language, and sharing the same cultural traditions.
**Status:**
Prestige positions in a society. May be ranked or unranked.

**Stratified sampling:**
A sampling technique used to insure some control over the spacing of samples. In this method two or more sampling strata within the population are established. These strata may be arbitrary or based on recognized differences in the area of study (e.g., topographic and ecological zones within a study area, depositional zones within a site, etc.). Once strata have been established, a representative sampling procedure may be used to select specific units (perhaps squares within a grid) for each stratum.

**Scraper:**
A tool used for scraping. Scrapers may be minimally formed, perhaps representing the use of a naturally sharp object (boulder spall), or be intentionally flaked. Scrapers can be unifacial or bifacial.

**Site:**
A site is the locus of any surviving physical evidence of past human activity, including the record of the effect of the activity on the environment. For the purposes of the National Park Service Cultural Sites Inventory, it is a resource for which decisions will be made, as mandated by the National Park Service.

**Site density:**
The quantity or number of sites in a given area. Site density is often a critical factor in developing research designs and cost estimates for study or mitigation.

**Study area:**
The zone or region selected for research. In cultural resource management investigations the study area limits should be that area which will lead to the most efficient and effective results with respect to the appropriate consideration of the cultural resources potentially affected. The study area should be specifically delineated in research proposals, research designs, contracts, and research agreements.

**Survey (archeological):**
A comprehensive and extended physical examination of a study area conducted to obtain reliable data on archeological resources and relevant environmental variables. Located sites are described, categorized, dated if possible, and their distributions noted. Test excavations may be necessary to identify the character, age, and significance of the resource. See also reconnaissance and intensive archeological survey.

**Taboo:**
Cultural prohibition of an act, violation of which is punishable by supernatural sanctions.
**Tchi Thos:**
Boulder spall scrapers used in hide preparation. Commonly found in Athapaskan sites.

**Tephra:**
A collective term for all clastic materials ejected from a volcano and transported through the air. It includes volcanic dust, ash, cinders, lapilli, scoria, pumice, bombs, and blocks.

**Terminal moraine:**
The outermost end moraine of a glacier or ice sheet, marking the maximum advance of the ice with deposits of glacial till or drift.

**Terrace:**
A relatively level bench or steplike surface breaking the continuity of a slope. The term is applied to both the lower or front slope (the riser) and the flat surface (the tread) and can apply to stream terraces, marine terraces, or structural terraces.

**Testing (archeological):**
The preliminary, exploratory and limited excavation of portions of sites or specific features within sites, carried out for the purpose of better defining site size (vertically and horizontally), site complexity, chronological span of components at sites, quality of subsurface materials, state of preservation and other aspects critical to the determination of site significance, problems for investigation, proper research methods, and research time and cost for future studies.

**Trade:**
A form of exchange between communities in which scarce items from one group are exchanged for desirable items from another group.

**Tradition:**
A sequence of styles or traits which develops continuously, thus forming an easily accounted-for series of advancements from one culture to another. A cultural class that displays an extensive distribution in time and a limited distribution in space. A temporal continuity represented by persistent configurations in single technologies or other systems of related forms.

**Tuff:**
A general term for all consolidated pyroclastic rocks.

**Tundra:**
A treeless plain that may be level or undulating and is characteristic of arctic regions, having a black muck soil and a permanently frozen subsoil.
Type:
An intuitive cultural class of discrete objects or a paradigmatic class of discrete objects defined by modes.

Typology:
The classification of artifacts, by type, in archeology.

Use wear:
Wear that results from use; physical evidence of a tool's use and/or function. Most types of use wear involve some form of damage, such as chipping, abrasion, crushing, dulling. Depending on the type of use and the relative hardness of the material, use wear may not be visible without magnification.

Wisconsinan glaciation:
The fourth and final Pleistocene glaciation in North America, beginning some 70,000 years ago. The Wisconsinan glaciation preceded the Holocene and correlates with the Wurm glaciation in Europe (sometimes called the Wisconsin glaciation).
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Raab, L. Mark and Timothy C. Klinger


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Rainey, Froelich G.

Reckord, Holly


Ritter, Dale F.

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Saleeby, Becky M., E. James Dixon and George S. Smith

Schiffer, Michael B. and George J. Gumerman

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Willey, Gordon R. and Philip Phillips  

Wilson, William H.  

Workman, William B.  


Yanert, W.  

Yesner, David R.  

Zagoskin, L. A.  
APPENDIX A

Summary Tables

Table 3: Summary of Archeological Field Research............................................171
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Table 5: Summary of Historic Sites.................................................................199
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<thead>
<tr>
<th>Researcher, References</th>
<th>Areas Surveyed/ Dates of Fieldwork</th>
<th>Recorded or Visited Sites/ Location of Collection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Excavations at Two Sites on the Teklanika River Mount McKinley National Park Alaska (West 1965)</strong></td>
<td>Reconnaissance of the Teklanika River at the park road (Sept. 1960) followed by 2 months excavation; Summer of 1961.</td>
<td>HEA-001*, HEA-002*(HEA-085); Collection at the Peabody Museum, Salem, Massachusetts</td>
</tr>
<tr>
<td><strong>An Archaeological Survey of Mount McKinley National Park (Treganza 1964)</strong></td>
<td>2 month reconnaissance of the park road corridor within the original Mt. McKinley Park boundaries; Summer of 1964.</td>
<td>HEA-160*, HEA-163*; Collections at the University of Alaska Museum, Fairbanks. HEA-159*, HEA-161*, HEA-162*; Collections at the Peabody Museum, Salem, Massachusetts</td>
</tr>
<tr>
<td>Researcher, References</td>
<td>Areas Surveyed/ Dates of Fieldwork</td>
<td>Recorded or Visited Sites/ Location of Collections</td>
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</tr>
<tr>
<td>Researcher, References</td>
<td>Areas Surveyed/ Dates of Fieldwork</td>
<td>Recorded or Visited Sites/ Location of Collection</td>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>C. Holmes, AHRS Files</td>
<td>Carlson Lake; Summer 1981</td>
<td>MMK-029</td>
</tr>
<tr>
<td>Researcher, References</td>
<td>Areas Surveyed/ Dates of Fieldwork</td>
<td>Recorded or Visited Sites/ Location of Collection</td>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>NPS Cultural Resources Mining Inventory and Monitoring (CRMIM) Program, 1985. NPS report in progress.</td>
<td>Mining claims and related areas; Summer 1985 (1 week)</td>
<td>MMK-034</td>
</tr>
<tr>
<td>Researcher, References</td>
<td>Areas Surveyed/ Dates of Fieldwork</td>
<td>Recorded or Visited Sites/ Location of Collection</td>
</tr>
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<td>--------------------------------------------------</td>
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<tr>
<td>Researcher, References</td>
<td>Areas Surveyed/ Dates of Fieldwork</td>
<td>Recorded or Visited Sites/ Location of Collection</td>
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<tr>
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<td>-----------------------------------------------</td>
</tr>
<tr>
<td>NPS Cultural Resources Mining Inventory and Monitoring (CRMIM) Program, 1989. NPS report in progress.</td>
<td>Mining claims and related areas; Summer 1989 (1 week)</td>
<td>MMK-111, MMK-112*, MMK-113, and MMK-114; Collection at NPS Alaska Regional Office, Anchorage</td>
</tr>
<tr>
<td>1988 Land Exchange Survey; NPS report in progress.</td>
<td>Swift Fork area (6 weeks) and Tokositna and Coffee River areas (10 days); Summer 1988</td>
<td>MMK-104, MMK-105, MMK-106</td>
</tr>
<tr>
<td>Researcher, References</td>
<td>Areas Surveyed/ Dates of Fieldwork</td>
<td>Recorded or Visited Sites/ Location of Collection</td>
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<td>------------------------</td>
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<td>------------------------------------------------</td>
</tr>
<tr>
<td>Bureau of Indian Affairs 14 (h)1 Survey (no report available). Referenced in Schneider et al. 1984:40-44.</td>
<td>Birch Creek area; Site evaluated 1982</td>
<td>MMK-031</td>
</tr>
<tr>
<td>Researcher, References</td>
<td>Areas Surveyed/ Dates of Fieldwork</td>
<td>Recorded or Visited Sites/ Location of Collection</td>
</tr>
<tr>
<td>------------------------</td>
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</tr>
</tbody>
</table>
TABLE 4: ARCHAEOLOGICAL SITE SUMMARY; RECORDED PREHISTORIC SITES

Denali National Park and Preserve

<table>
<thead>
<tr>
<th>Site #/ Map Quad</th>
<th>Previous/Other Designations</th>
<th>Type of Deposit</th>
<th>Cultural Material/Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEA-001</td>
<td>Healy 1</td>
<td>Surface/Subsurface</td>
<td>Bifacial projectile points and knives, Campus-type microcores, tabular blade cores, blades and microblades, side scrapers and other tools, small amounts of mammal bone</td>
</tr>
<tr>
<td>C-6</td>
<td>Teklanika West</td>
<td>Lithic Deposit</td>
<td></td>
</tr>
<tr>
<td>HEA-002</td>
<td>Healy 2</td>
<td>Surface/Subsurface</td>
<td>Bifacial knives, polished stone adze head, end and side scrapers, a pebble hammer, tabular blade cores, Campus-type microcores, blades and other tools</td>
</tr>
<tr>
<td>C-6</td>
<td>Teklanika East</td>
<td>Lithic Deposit</td>
<td></td>
</tr>
<tr>
<td>HEA-023</td>
<td>Surface/Subsurface</td>
<td>Lithic Deposit</td>
<td>Microblades, burin spall, transverse burin, flakes</td>
</tr>
<tr>
<td>D-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
</tr>
<tr>
<td>----------------</td>
<td>------------------------------</td>
<td>----------------------------------</td>
<td>---------------------------------------------------------------------</td>
</tr>
<tr>
<td>HEA-024 D-5</td>
<td></td>
<td>Subsurface Lithic Deposit</td>
<td>Lithic debris, burned bone, charcoal and fire-cracked rock</td>
</tr>
<tr>
<td>HEA-085* C-6</td>
<td>Teklanika Archeological</td>
<td>Archeological District</td>
<td>Microblades, microblade cores, knives, scrapers and flakes (includes HEA-001 and HEA-002)</td>
</tr>
<tr>
<td></td>
<td>District</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-133 C-4</td>
<td>MOMC-80-002 Riley Creek Lithic Site</td>
<td>Surface/Subsurface Lithic Deposit</td>
<td>Lithic debris (chert and basalt) some flakes appear to have been heat treated</td>
</tr>
<tr>
<td>HEA-136 C-5</td>
<td>MOMC-80-007 Savage River Microblade Site</td>
<td>Surface Lithic Deposit</td>
<td>3 wedge-shaped microblade cores, 3 microblades, 2 possible core tablets, 1 large blade fragment</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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<td>----------------------------------------------------------------</td>
</tr>
<tr>
<td>HEA-143</td>
<td>DENA-81-002</td>
<td>Surface Lithic Deposit</td>
<td>1 chert flake, 1 worked quartz fragment</td>
</tr>
<tr>
<td>C-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-144</td>
<td>DENA-81-003</td>
<td>Surface Lithic Deposit</td>
<td>Lithic debris, obsidian, chert and basalt flakes, 1 flake with hinge fracture</td>
</tr>
<tr>
<td>C-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-145</td>
<td>DENA-81-004</td>
<td>Surface Lithic Deposit</td>
<td>Lithic debris, 1 blade-like flake</td>
</tr>
<tr>
<td>C-4</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-146</td>
<td>DENA-81-001</td>
<td>Surface/Subsurface Lithic Deposit</td>
<td>Flake core fragment and flake of grey siltstone</td>
</tr>
<tr>
<td>C-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-148</td>
<td>MOMC-80-014a</td>
<td>Surface Lithic Deposit</td>
<td>Large bifaces, chopping tools, blades and retouched flakes, lithic debris</td>
</tr>
<tr>
<td>C-6</td>
<td>1-SP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Healy 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-149 C-6</td>
<td>MOMC-80-014b 2-SP Healy 4</td>
<td>Surface Lithic Deposit</td>
<td>Large bifaces, end and side scrapers, leaf shaped blade (point)</td>
</tr>
<tr>
<td>HEA-150 C-6</td>
<td>MOMC-80-016 2-MW Healy 5</td>
<td>Surface Lithic Deposit</td>
<td>Possible microblade core, microblades, scrapers, an awl and lithic debris (chert, chalcedony and metamorphosed siltstone)</td>
</tr>
<tr>
<td>HEA-151 C-6</td>
<td>1-MW Healy 6</td>
<td>Surface Lithic Deposit</td>
<td>Crude microblades, small scraper and lithic debris</td>
</tr>
<tr>
<td>HEA-152 C-5</td>
<td>1-HC Healy 7</td>
<td>Surface Lithic Deposit</td>
<td>Small hearths exposed at surface, points (3), side blade, 2 side scrapers, biface fragment, retouched flakes, lithic debris</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-153 C-5</td>
<td>MOMC-80-019 1-SVR Healy 8</td>
<td>Surface Lithic Deposit</td>
<td>Small biface, 2 points, core fragments, obsidian blade with cortex, chert blade, retouched flakes, lithic debris</td>
</tr>
<tr>
<td>HEA-154 C-5</td>
<td>1-PR Healy 9</td>
<td>Isolated Find/ Surface Lithic Deposit</td>
<td>Single retouched obsidian flake</td>
</tr>
<tr>
<td>HEA-155 C-5</td>
<td>1-SVR Healy 10</td>
<td>Surface Lithic Deposit</td>
<td>Single unifacially worked blade, 1 core and 2 flakes</td>
</tr>
<tr>
<td>HEA-156 C-5</td>
<td>2-SVR Healy 11</td>
<td>Surface Lithic Deposit</td>
<td>Scrapers (5), biface fragment</td>
</tr>
<tr>
<td>HEA-157 C-5</td>
<td>3-SYR Healy 12</td>
<td>Isolated Find/ Surface Lithic Deposit</td>
<td>Single scraper</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Site #/Map Quad</th>
<th>Previous/Other Designations</th>
<th>Type of Deposit</th>
<th>Cultural Material/Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEA-158 C-5</td>
<td>1-HIC, Healy 13</td>
<td>Surface Lithic Deposit</td>
<td>Side scrapers and core</td>
</tr>
<tr>
<td>HEA-159 C-6</td>
<td>Healy 14</td>
<td>Surface Lithic Deposit</td>
<td>Agate core and lithic debris</td>
</tr>
<tr>
<td>HEA-160 C-5</td>
<td>MOMC-80-008, Healy 15</td>
<td>Surface Lithic Deposit</td>
<td>Possible hammerstone, chert blade blank, side notched point, thinning flake, pecked stone, &quot;mortar-like stone&quot;, lithic debris (chert, obsidian)</td>
</tr>
<tr>
<td>HEA-161 C-5</td>
<td>Healy 16</td>
<td>Surface Lithic Deposit</td>
<td>Lithic debris</td>
</tr>
<tr>
<td>HEA-162 C-5</td>
<td>MOMC-80-006, Healy 17</td>
<td>Surface Lithic Deposit</td>
<td>Obsidian blunt-nosed scraper, chert scraper, &quot;various imported flake materials&quot;</td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/ Features</td>
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<tr>
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<td>---------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>HEA-163 C-5</td>
<td>MOMC-80-004</td>
<td>Surface Lithic Deposit</td>
<td>Large biface, basalt fragments (possible flakes and core), scraper and lithic debris</td>
</tr>
<tr>
<td></td>
<td>Healy 18</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-164 C-5</td>
<td>MOMC-80-009</td>
<td>Isolated Find/ Surface Lithic Deposit</td>
<td>Single black chert flake</td>
</tr>
<tr>
<td>HEA-165 C-5</td>
<td>MOMC-80-010</td>
<td>Isolated Find/ Surface Lithic Deposit</td>
<td>Burin-like flake</td>
</tr>
<tr>
<td>HEA-166 C-5</td>
<td>MOMC-80-011</td>
<td>Surface Lithic Deposit</td>
<td>Possible core fragment (black chert) quartz or chalcedony flake, possible side blade of pinkish CCS</td>
</tr>
<tr>
<td>HEA-167 C-6</td>
<td>MOMC-80-012</td>
<td>Surface Lithic Deposit</td>
<td>Lithic Debris, cores, biface preform (metamorphosed silts)</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-168 C-6</td>
<td>MOMC-80-013</td>
<td>Surface Lithic Deposit</td>
<td>Lithic debris (good quality chert)</td>
</tr>
<tr>
<td>HEA-169 C-6</td>
<td>MOMC-80-015</td>
<td>Surface Lithic Deposit</td>
<td>Core, lithic debris (chert)</td>
</tr>
<tr>
<td>HEA-170 C-6</td>
<td>MOMC-80-017</td>
<td>Surface Lithic Deposit</td>
<td>Biface preform, flake core and lithic debris (fine grained black chert and obsidian)</td>
</tr>
<tr>
<td>HEA-171 C-5</td>
<td>MOMC-80-018</td>
<td>Surface Lithic Deposit</td>
<td>Lithic debris (chert) Utilized flake with chisel-like edge</td>
</tr>
<tr>
<td>HEA-173 C-5</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Burin or microblade core and a point or knife</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-192</td>
<td>DENA-82-020</td>
<td>Surface Lithic Deposit</td>
<td>Blade core and flakes</td>
</tr>
<tr>
<td>C-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-193</td>
<td>DENA-83-003</td>
<td>Surface Lithic Deposit</td>
<td>Lithic debris, core remnant, biface fragment (most flakes of black chert)</td>
</tr>
<tr>
<td>C-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-232</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Flakes, microblades and a wedge-shaped core</td>
</tr>
<tr>
<td>B-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-255</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Surface lithic scatter consisting of flakes, two complete bifaces and three biface fragments</td>
</tr>
<tr>
<td>D-5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-256</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Complete ovate biface</td>
</tr>
<tr>
<td>D-5</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-257 D-5</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Black chert flakes and shatter</td>
</tr>
<tr>
<td>HEA-258 D-5</td>
<td></td>
<td>Isolated Find/</td>
<td>Rhyolite uniface</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Surface Lithic Deposit</td>
<td></td>
</tr>
<tr>
<td>HEA-259 D-5</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Small lithic scatter consisting of a grey chert side scraper, a coarse-grained biface tip, and seven flakes (one utilized)</td>
</tr>
<tr>
<td>HEA-260 D-6</td>
<td></td>
<td>Surface/Subsurface Lithic Deposit</td>
<td>Flakes on surface in deflated area. Subsurface deposit (to depth of 50cm) contained a cobble tool, core and flakes</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-261 D-5</td>
<td>Isolated Find/</td>
<td>Thin, delicately flaked bi-pointed projectile point</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Surface Lithic Deposit</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-263 D-5</td>
<td>Surface Lithic Deposit</td>
<td>Medial Blade fragment and a core</td>
<td></td>
</tr>
<tr>
<td>HEA-264 D-5</td>
<td>Surface Lithic Deposit</td>
<td>Surface lithic scatter of 20 flakes. Site area contains subsurface eolian deposits, but no artifacts were recovered from below the surface</td>
<td></td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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<tr>
<td>HEA-265 D-5</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Surface lithic scatter including flakes, a fragment of a large lanceolate biface, and a chert biface base fragment. Site area contains subsurface eolian deposits, but no artifacts were recovered from below the surface</td>
</tr>
<tr>
<td>MMK-015 D-3?</td>
<td>DENA-81-008</td>
<td>Isolated Find/Surface Lithic Deposit</td>
<td>Small black chert flake</td>
</tr>
<tr>
<td>MMK-026 B-2</td>
<td>MOMC-80-022</td>
<td>Isolated Find/Surface Lithic Deposit</td>
<td>Obsidian flake with cortex, grey CCS flake</td>
</tr>
<tr>
<td>MMK-027 C-2</td>
<td>DENA-80-001 Riley Creek Overlook Site</td>
<td>Surface Lithic Deposit</td>
<td>Chert and obsidian flakes, utilized flake (2 localities)</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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<tr>
<td>MMK-028 C-2</td>
<td>DENA-80-002 Willow Creek Overlook Site</td>
<td>Surface Lithic Deposit</td>
<td>Possible flake core remnant, lithic debris (4 localities)</td>
</tr>
<tr>
<td>MMK-029 D-4</td>
<td>Carlson Lake Lithic Site</td>
<td>Surface Lithic Deposit</td>
<td>Lithic remains</td>
</tr>
<tr>
<td>MMK-031 D-4</td>
<td></td>
<td>Surface/Subsurface (Settlement)</td>
<td>Birch Creek settlement and cemetery, both historic and prehistoric components</td>
</tr>
<tr>
<td>MMK-034 C-2</td>
<td>DENA-85-001</td>
<td>Subsurface Lithic Deposit</td>
<td>Unifacially flaked scraper, 3 flakes</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>MMK-035 B-2</td>
<td>DENA-83-002 Muldrow Point Site</td>
<td>Isolated Find/Surface Lithic Deposit</td>
<td>2 biface fragments which fit together to form a complete lanceolate point or lance head, 18.7cm long (surface of artifact is extensively weathered in appearance)</td>
</tr>
<tr>
<td>MMK-036 B-2</td>
<td>DENA-83-001</td>
<td>Isolated Find/Surface Lithic Deposit</td>
<td>Single utilized obsidian flake with cortex, appears to have been heat treated</td>
</tr>
<tr>
<td>MMK-037 B-2</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Core remnant (chunky), utilized flake, possible retouched flakes, primary and thinning flakes, lithic debris</td>
</tr>
<tr>
<td>MMK-050 C-2</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>1 broken projectile point, 1 point base and several flakes</td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/ Features</td>
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<tr>
<td>MMK-065 C-2</td>
<td>Surface Lithic Deposit</td>
<td>2 bifacially worked tools of rhyolite or argillite</td>
<td></td>
</tr>
<tr>
<td>MMK-066 C-2</td>
<td>Surface Lithic Deposit</td>
<td>1 crudely worked bifacial stone tool, fire hearth and lithic debris</td>
<td></td>
</tr>
<tr>
<td>MMK-068 C-2</td>
<td>Surface Lithic Deposit</td>
<td>1 stemmed projectile point, a notched slab of schist (possible shaft straightener), 3 tool fragments and other lithic debris. Adjacent to</td>
<td></td>
</tr>
<tr>
<td>MMK-069 C-2</td>
<td>Isolated Find/ Surface Lithic Deposit</td>
<td>Single unifacially flaked tool of fine-grained basalt</td>
<td></td>
</tr>
<tr>
<td>MMK-071 C-2</td>
<td>Surface/ Subsurface Lithic Deposit</td>
<td>Eroding fire hearth and 12 chert flakes</td>
<td></td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>MMK-072 C-2</td>
<td></td>
<td>Isolated Find/Surface Lithic Deposit</td>
<td>Flaked black basalt cobble. Adjacent to MMK-068</td>
</tr>
<tr>
<td>MMK-078 B-1</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Small scatter of 4 lithic flakes</td>
</tr>
<tr>
<td>MMK-096 C-2</td>
<td></td>
<td>Subsurface Lithic Deposit</td>
<td>Buried hearth feature and 1 associated rhyolite flake</td>
</tr>
<tr>
<td>MMK-097 C-2</td>
<td></td>
<td>Isolated Find/Surface Lithic Deposit</td>
<td>Single lithic tool fragment, probably the base of a lanceolate projectile point</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
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<td>Type of Deposit</td>
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</tr>
<tr>
<td>MMK-098 C-2</td>
<td>Isolated Find/ Surface Lithic Deposit</td>
<td>Single obsidian flake</td>
<td></td>
</tr>
<tr>
<td>MMK-101 C-2</td>
<td>Surface Lithic Deposit</td>
<td>6 flakes representing 4 different material types</td>
<td></td>
</tr>
<tr>
<td>MMK-102 C-2</td>
<td>Surface Lithic Deposit</td>
<td>2 waste flakes of medium-grained black basalt, step-fractured below the platforms</td>
<td></td>
</tr>
<tr>
<td>MMK-103 C-2</td>
<td>Isolated Find/ Surface Lithic Deposit</td>
<td>A single flaked pebble of coarse, banded siltstone, possibly an expedient scraping tool</td>
<td></td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
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<tr>
<td>MMK-104 A-5</td>
<td>Surface Lithic Deposit</td>
<td>1 andesite flake core with several small flakes removed, a broken basalt flake, a piece of angular basalt debris and a crude basalt core (possibly a broken core/chopper)</td>
<td></td>
</tr>
<tr>
<td>MMK-105 A-5</td>
<td>Surface Lithic Deposit</td>
<td>1 unifacially worked point, 1 utilized obsidian flake and 2 non-diagnostic flakes</td>
<td></td>
</tr>
<tr>
<td>MMK-106 A-5</td>
<td>Surface Lithic Deposit</td>
<td>1 small end scraper made on a basalt primary flake and a basalt primary flake</td>
<td></td>
</tr>
<tr>
<td>MMK-107 B-2</td>
<td>Surface Lithic Deposit</td>
<td>2 non-diagnostic chert flakes</td>
<td></td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>MMK-108 B-2</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>Site contains 2 loci, locus A contained 1 fine-grained basalt biface and over 35 small reduction flakes from the manufacture of this tool, as well as 1 large basalt flake and a chert flake. Locus B consists of 1 chert flake and 1 rhyolite flake</td>
</tr>
<tr>
<td>FAI-348 A-5</td>
<td></td>
<td>Surface Lithic Deposit</td>
<td>42 chert flakes, a core and a biface fragment, located outside park in proposed land exchange area</td>
</tr>
<tr>
<td>(no AHRS #)</td>
<td>DENA-81-017</td>
<td>Surface (Above Ground Rock Feature)</td>
<td>20 x 10 meter rock formation, sculpted by water erosion. Holds a pool of water up to 1.5 meters deep. Site is known from Koyukon oral history (no artifacts or other cultural material found)</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Type of Deposit</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>(no AHRS #)</td>
<td>DENA-82-021</td>
<td>Isolated Find/</td>
<td>A possible lithic artifact collected by a park visitor.</td>
</tr>
<tr>
<td>Mt. McKinley</td>
<td>&quot;Thibault artifact&quot;</td>
<td>Surface Lithic Deposit</td>
<td>Described as a &quot;pebble/chunk&quot;</td>
</tr>
<tr>
<td>B-1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
TABLE 5: ARCHEOLOGICAL SITE SUMMARY; RECORDED HISTORIC SITES

Denali National Park and Preserve

<table>
<thead>
<tr>
<th>Site #/Map Quad</th>
<th>Previous/Other Designations</th>
<th>Site Type</th>
<th>Cultural Material/Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEA-059 C-4</td>
<td>Morino Roadhouse</td>
<td>Habitation Site; roadhouse</td>
<td>Rectangular, two story log structure dating to the 1920s (reported burned in the 1950s); site now occupied by NPS visitor facilities</td>
</tr>
<tr>
<td>HEA-091 D-5, D-6</td>
<td>Stampede Trail</td>
<td>Transportation Site; trail</td>
<td>Historic road/trail linking the Stampede mining area with the Alaska Railroad at Lignite (see MMK-095)</td>
</tr>
<tr>
<td>HEA-094 D-5</td>
<td>Habitation Site; cabin</td>
<td></td>
<td>Log cabin and associated 10x10m occupation area</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-107 D-6</td>
<td></td>
<td>Placer Mining Equipment</td>
<td>Mining sluicing equipment adjacent to a small creek</td>
</tr>
<tr>
<td>HEA-108 D-5</td>
<td></td>
<td>Habitation Site; cabin</td>
<td>Cabin with debris, including tin cans and a Yukon stove</td>
</tr>
<tr>
<td>HEA-132 C-4</td>
<td>MOMC-80-001 Riley Creek</td>
<td>Habitation Site; cabin group</td>
<td>Remains of 7 to 9 log structures along Riley Creek, near the trestle area</td>
</tr>
<tr>
<td></td>
<td>Historic Ruins</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-134 C-4</td>
<td>MOMC-80-003</td>
<td>Habitation Site; cabin group</td>
<td>Remains of 4 to 5 cabins with associated materials including tin cans, buckets and wagon parts</td>
</tr>
<tr>
<td>HEA-135</td>
<td>MOMC-80-005</td>
<td>Cairn</td>
<td>Cairn consisting of 6-7 large boulders atop a knob. Possibly a survey or boundary marker.</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
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</tr>
<tr>
<td>HEA-147* C-4</td>
<td></td>
<td>Historical District</td>
<td>McKinley Park Headquarters Historical District; park office building, warehouse, barn, dog feed cache and storage structure, electric light plant, garage, comfort station, boiler house, ranger's dormitory, employee residences, superintendent's garage, and a garage and repair shop</td>
</tr>
<tr>
<td>HEA-215 C-5</td>
<td>Upper Savage River Cabin Building #30</td>
<td>Habitation Site; camp</td>
<td>14 x 16' cabin of logs hewn on 3 sides with medium gable roof and porch. Built in 1925 by ARC, moved in 1940. Reportedly the oldest ARC cabin in DENA. Accompanying structures include 4 dog houses, an outhouse, and a new 8 x 8' building</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
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<tr>
<td>HEA-216 C-5</td>
<td>Sanctuary</td>
<td>Habitation Site; cabin</td>
<td>14 x 16' cabin of logs hewn on 3 sides, medium gable roof and porch. Built in 1926 by ARC. Accompanying structures include an outhouse, a tool box and a storage shed</td>
</tr>
<tr>
<td></td>
<td>River Cabin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Building #31</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-217 C-6</td>
<td>Igloo Creek</td>
<td>Habitation Site; cabin</td>
<td>14 x 16' cabin of logs hewn on 3 sides, medium gable roof and porch. Built in 1928 by ARC. Outhouse nearby</td>
</tr>
<tr>
<td></td>
<td>Cabin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Building #25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HEA-218 C-6</td>
<td>Upper East Fork Cabin</td>
<td>Habitation Site; cabin</td>
<td>14'7&quot; x 16'1&quot; cabin of logs hewn on 3 sides, medium gable roof and porch. Built in 1929 by ARC. Accompanying structures include an outhouse, storage shed and small (recent) log cabin</td>
</tr>
<tr>
<td></td>
<td>Building #29</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>HEA-219 D-6</td>
<td>Lower East Fork Ranger Cabin Building #9</td>
<td>Habitation Site; cabin</td>
<td>11'10&quot; x 14' cabin of logs peeled on 3 sides, medium gabled roof and porch. Built in 1930 as a boundary cabin. Accompanying structures include an outhouse and 4 deteriorating doghouses</td>
</tr>
<tr>
<td>HEA-220 C-4</td>
<td>Riley Creek Ranger Cabin Building #20</td>
<td>Habitation Site; cabin</td>
<td>20 x 14' cabin of peeled logs, medium gabled roof and porch. Built in 1931 as a patrol cabin.</td>
</tr>
<tr>
<td>HEA-221 B-5</td>
<td>Upper Windy Creek Ranger Cabin Building #7</td>
<td>Habitation Site; cabin and cabin ruins</td>
<td>12 x 14' cabin of peeled logs, medium gabled roof and porch. Built in 1931 to replace an older structure built in 1924. Accompanying structures include the ruins of the original cabin and cache</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-222 D-5</td>
<td>Lower Savage River Cabin (Ewe Creek Ranger Cabin) Building #8</td>
<td>Habitation Site; cabin</td>
<td>12 x 14’ cabin of peeled logs, medium gabled roof and porch. Built in 1932 near park boundary.</td>
</tr>
<tr>
<td>HEA-223 D-6</td>
<td>Shushana River Ranger Cabin Building #17</td>
<td>Habitation Site; cabin</td>
<td>12 x 14’ cabin of peeled logs, medium gabled roof and porch. Built in 1932 near park boundary.</td>
</tr>
<tr>
<td>HEA-224 B-4</td>
<td>Lower Windy Creek Ranger Cabin Building #15</td>
<td>Habitation Site; cabin</td>
<td>12 x 14’ cabin of peeled logs, medium gabled roof and porch. Built in 1932. Accompanying structures include 7 log doghouses, a log cache and a log outhouse.</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-227 B-6</td>
<td></td>
<td>Load Mining Operation; mining process unknown</td>
<td>Large ore box or coal container, milled lumber, an earthen dam and the remains of a cache dating to the late 1930s to the early 1940s</td>
</tr>
<tr>
<td>HEA-228 A-6</td>
<td></td>
<td>Load Mining Camp and Operation; mining process unknown</td>
<td>3 log cabins, a log cache, two outhouses, a trash dump, a bridge and an overgrown road dating to the 1920s-30s</td>
</tr>
<tr>
<td>HEA-229 A-6</td>
<td></td>
<td>Load Mining Camp; mining process unknown</td>
<td>Collapsed cabin, deteriorated elevated cache and log doghouse and two sleds dating to the 1920s</td>
</tr>
<tr>
<td>HEA-230 A-6</td>
<td></td>
<td>Transportation Site; bridge</td>
<td>Partially collapsed bridge consisting of several intact sections including a 100' section spanning the main river channel, and an associated pile-driver both of which date to the 1930s</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>HEA-231 A-6</td>
<td></td>
<td>Load Mining Operation; milling and transportation</td>
<td>A single wooden crib-like structure and associated structural debris</td>
</tr>
<tr>
<td>HEA-262 D-6</td>
<td></td>
<td>Placer Mining Operation</td>
<td>Tailings, the remains of one or more sluice boxes and assorted additional artifacts</td>
</tr>
<tr>
<td>MMK-001 D-2</td>
<td>Diamond City</td>
<td>Mining Community</td>
<td>Site of mining camp established around 1905</td>
</tr>
<tr>
<td>MMK-002 C-2</td>
<td>Kantishna (Eureka)</td>
<td>Mining Community</td>
<td>Mining camp associated with the Kantishna Gold Rush. See also MMK-099</td>
</tr>
<tr>
<td>MMK-003 C-2</td>
<td>DENA-82-003 Glacier City</td>
<td>Mining Community</td>
<td>Community associated with the Kantishna Gold Rush. Includes 3 clusters of buildings (cabins and wood frame buildings), a garage, a horse barn with an upstairs bunkhouse, a collapsed blacksmith shop, trail system and outbuildings</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
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<tr>
<td>MMK-011 D-2</td>
<td></td>
<td>Resource Extraction; historic fish camp</td>
<td>Two cabins, a fish drying rack and a shelter. Used by a number of miners, trappers and Kantishna residents, including Joe and Fanny Quigley, between 1940s and the 1960s.</td>
</tr>
<tr>
<td>MMK-016 C-1</td>
<td>DENA-82-013 Stampede Mining Complex</td>
<td>Lode Mining Operation</td>
<td>Antimony mining complex in operation intermittently between 1916 and 1970. The complex includes the mine, road/trail system, equipment, airstrip, log cabin and numerous other outbuildings (mill, assay office, bunkhouse, etc).</td>
</tr>
<tr>
<td>MMK-017 C-2</td>
<td>DENA-82-006 Busia Cabin</td>
<td>Placer Mining Camp; hydraulic mining</td>
<td>Single story log cabin built in 1910, and an associated trash scatter as well as a modern outhouse, a large wood-pile and a generator.</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Material/Features</td>
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<tr>
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</tr>
<tr>
<td>MMK-018 C-2</td>
<td>DENA-82-006; Kantishna Roadhouse</td>
<td>Habitation Site; roadhouse</td>
<td>Two-story log structure (23’x 19’) with a cellar built 1910-1920</td>
</tr>
<tr>
<td>MMK-019 B-2, C-2</td>
<td>DENA-82-006; Kantishna Ditch</td>
<td>Placer Mining Operation; hydraulic mining</td>
<td>Log and earthen dam at the north end of Wonder Lake and diversion dams on Lake Creek. The ditch supplied water to the Kantishna mines</td>
</tr>
<tr>
<td>MMK-020 C-2</td>
<td>DENA-82-006</td>
<td>Placer Mining Camp; mining methods unknown</td>
<td>Single story wood frame structure on a basement (may have been built by Kantishna Mining Company and used as Fanny Quigley’s home)</td>
</tr>
<tr>
<td>MMK-021 D-3</td>
<td>Roosevelt</td>
<td>Mining Community</td>
<td>Mining supply and transportation (overland and river) hub; remains include 2 cabins, 2 caches, dog kennel</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Material/Features</td>
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</tr>
<tr>
<td>MMK-022 C-2</td>
<td>DENA-82-022 Banjo Mill</td>
<td>Lode Mining Operation</td>
<td>Ore mill for Charles Bunnell's hard rock gold mining operation on Eldorado Creek (in operation until 1952)</td>
</tr>
<tr>
<td>MMK-023 C-2</td>
<td>Upper Caribou Creek Historic Complex</td>
<td>Placer Mining Camp and Operation; dragline</td>
<td>Includes buildings, foundations, wagons and assorted tools as well as many other artifacts</td>
</tr>
<tr>
<td>MMK-024 B-2</td>
<td>MOMC-80-020 Cairn</td>
<td></td>
<td>Rock cairn on a lateral moraine, possibly once a surveyor's station (1 x 1m and 33cm high, made of approximately 20 granite and metasedimentary rocks)</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Materials/Features</td>
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</tr>
<tr>
<td>MMK-025 B-2</td>
<td>MOMC-81-021</td>
<td>Habitation Site; camp with cache</td>
<td>Collapsed cache showing notched construction with 3.5' long wire nails and metal hinges on the door (slightly over 2 x 2m) Other items include a square stove, an old box, and a stick of dynamite (under the stove) a possible tent frame surrounds the stove</td>
</tr>
<tr>
<td>MMK-031 D-4</td>
<td>Birch Creek Village; Birch Creek Cemetery</td>
<td>Native Community;</td>
<td>An important Athapaskan settlement at the mouth of Birch Creek; both prehistoric and historic cultural components</td>
</tr>
<tr>
<td>MMK-038 B-2</td>
<td>DENA-84-002</td>
<td>Cairn</td>
<td>Stone cairn. Possibly a survey marker</td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
<td>Cultural Material/ Features</td>
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</tr>
<tr>
<td>MMK-039 C-2</td>
<td></td>
<td>Placer Mining Operation;</td>
<td>3 placer mining prospects, a possible boomer dam, a shallow ditch-like trail, tailings and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>open-cut mining</td>
<td>associated buckets, a shovel head, a section of metal sluice grating and other associated</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(hand mining methods)</td>
<td>artifacts, probably dating to before 1930</td>
</tr>
<tr>
<td>MMK-040 C-2</td>
<td>Taylor Cabin</td>
<td>Placer Mining Camp;</td>
<td>Single log cabin with a milled lumber roof covered with sod, two trash scatters and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>open-cut mining</td>
<td>associated cultural features, dating to the 1930s</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(mechanized methods)</td>
<td></td>
</tr>
<tr>
<td>MMK-041 C-2</td>
<td></td>
<td>Placer Mining Operation;</td>
<td>Water diversion system including two wooden header penstock boxes, remains of two wooden</td>
</tr>
<tr>
<td></td>
<td></td>
<td>hydraulic mining</td>
<td>flume sections, a ditch line with scattered sections of riveted metal pipe and a giant nozzle</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Site #/Map Quad</th>
<th>Site Type</th>
<th>Cultural Material/Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>MMK-042 C-2</td>
<td>Placer Mining Operation; hydraulic mining</td>
<td>Water diversion system including remnants of riveted metal pipe, a wooden flume and attached headgate and several sections of ditch line. Pipe sections are approximately 5 meters long and 60 cm in diameter.</td>
</tr>
<tr>
<td>MMK-043 C-2</td>
<td>Placer Mining Operation; mining method unknown</td>
<td>Isolated group of logs, consisting of 8 axe-cut logs lying horizontally and parallel to each other, eroding out of the cut bank (probably mining-related).</td>
</tr>
<tr>
<td>MMK-044 C-2</td>
<td>Placer Mining Camp; open-cut mining, dragline (mechanized methods)</td>
<td>Mining camp associated with the Carrington Co., (1939-1948). Features include standing cabin, a shed, tent platforms, cabin and cache ruins, a diversion ditch/water system, wagon remains, and many associated artifacts. See also MMK-114.</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>MMK-045 C-2</td>
<td>Placer Mining Operation; hydraulic mining</td>
<td>Hydraulic mining system consisting of remnants of a flume line, a ditch line and the ruins of a penstock regulator-header box</td>
</tr>
<tr>
<td>MMK-046 C-2</td>
<td>Lode Mining Camp and Operation; extraction</td>
<td>Two distinct loci, Locus 1 includes 2 wood-frame cabins, remains of a log cache, a privy, trash dump and associated artifacts; Locus 2 consists of 2 adits and associated mining equipment</td>
</tr>
<tr>
<td>MMK-047 C-2</td>
<td>Transportation Site; equipment</td>
<td>Stoneboat or skid constructed of timbers and 1 x 12&quot; planks</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>MMK-048 C-2</td>
<td>Placer Mining Operation; open-cut mining, dragline equipment (mechanized methods)</td>
<td>2 large, cast iron drag-line buckets (bearing manufacturer's name and patent dates for the year 1930), three 55 gallon drums and a scatter of engine parts and plywood</td>
</tr>
<tr>
<td>MMK-049 C-2</td>
<td>Placer Mining Camp</td>
<td>Ruins of 2 wood frame cabins with horizontal board and batten walls (one with a milled door and distinctive glass doorknob) and associated artifacts including a wooden table</td>
</tr>
<tr>
<td>MMK-051 C-2</td>
<td>Placer Mining Camp; open-cut mining (hand mining methods)</td>
<td>A partially collapsed log cabin (12'4&quot;x10'4&quot;) constructed using a modified dovetailed notching technique with a milled lumber roof, the remains of an elevated cache with 6'metal support poles, and associated household goods, food containers and mining tools, dating to the mid-1930s</td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>MMK-052</td>
<td></td>
<td>Placer Mining Camp and Operation; hydraulic mining</td>
</tr>
<tr>
<td>C-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMK-053</td>
<td></td>
<td>Placer Mining Camp</td>
</tr>
<tr>
<td>C-2</td>
<td></td>
<td></td>
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<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
<td>MMK-054 C-2</td>
<td></td>
<td>Placer Mining Operation; hydraulic mining</td>
</tr>
<tr>
<td>MMK-055 C-2</td>
<td></td>
<td>Placer Mining Camp</td>
</tr>
<tr>
<td>MMK-056 C-2</td>
<td>Placer Mining Camp and Operation; dragline</td>
<td>Remains of a dragline or dry land dredge (self-powered dragline, running gear and track assembly, base platform and turntable, engine body, cable assembly and the basal portion of the boom) serial and model numbers are visible (see MMK-057)</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
<td>MMK-057 C-2</td>
<td></td>
<td>Placer Mining Operation;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dragline</td>
</tr>
<tr>
<td>MMK-058 C-2</td>
<td>Glacier Creek Cabin #3</td>
<td>Habitation Site; cabin and cache</td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>MMK-059 C-2</td>
<td>Glacier Creek Cabin #1</td>
<td>Habitation Site; cabin and cache</td>
</tr>
<tr>
<td>MMK-060 C-2</td>
<td>Glacier Creek Cabin #2</td>
<td>Placer Mining Camp and Operation; open-cut mining (hand methods)</td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>MMK-061 C-2</td>
<td>Little Annie Mine</td>
<td>Lode Mining Camp and Operation; extraction</td>
</tr>
<tr>
<td>MMK-062 C-2</td>
<td>Placer Mining Camp</td>
<td></td>
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<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
<td>MMK-063 C-2</td>
<td></td>
<td>Placer Mining Camp</td>
</tr>
<tr>
<td>MMK-064 C-2</td>
<td>DENA-86-021</td>
<td>Habitation Site; cache</td>
</tr>
<tr>
<td>MMK-067 C-2</td>
<td></td>
<td>Habitation Site; cabin and cache</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
<td>----------------</td>
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<tr>
<td>MMK-070 C-2</td>
<td></td>
<td>Placer Mining</td>
</tr>
<tr>
<td>MMK-077 B-3</td>
<td>Taylor Antimony Mine</td>
<td>Lode Mining</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
<td>MMK-079</td>
<td></td>
<td>Lode Mining Operation; development work</td>
</tr>
<tr>
<td>MMK-080</td>
<td>Skookona Prospect</td>
<td>Lode Mining Operation; prospecting and exploration</td>
</tr>
<tr>
<td>MMK-081</td>
<td>Humbolt Prospect</td>
<td>Lode Mining Camp and Operation; development work</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
<td>MMK-082 C-2</td>
<td>McGonagall Prospect</td>
<td>Lode Mining Camp and Operation; development work</td>
</tr>
<tr>
<td>MMK-083 C-2</td>
<td>Busia Grave</td>
<td>Historic Gravesite</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
<td>MMK-084</td>
<td></td>
<td>Habitation Site; doghouse</td>
</tr>
<tr>
<td>C-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMK-085</td>
<td></td>
<td>Habitation Site; cabin and cache</td>
</tr>
<tr>
<td>C-2</td>
<td></td>
<td></td>
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<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
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<tr>
<td>MMK-086 C-2</td>
<td></td>
<td>Placer Mining Camp</td>
</tr>
<tr>
<td>MMK-087 C-2</td>
<td></td>
<td>Placer Mining Camp and Operation; prospecting and exploration</td>
</tr>
<tr>
<td>MMK-089 C-2</td>
<td></td>
<td>Lode Mining Camp; development work</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
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</tr>
<tr>
<td>MMK-090 C-2</td>
<td></td>
<td>Lode Mining Operation; extraction</td>
</tr>
<tr>
<td>MMK-091 C-3</td>
<td></td>
<td>Lode Mining Camp and Operation; extraction</td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<tr>
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</tr>
<tr>
<td>MMK-092 C-3</td>
<td>&quot;Neversweat&quot; mine</td>
<td>Lode Mining Camp and Operation; prospecting and exploration</td>
</tr>
<tr>
<td>MMK-093 C-3</td>
<td>Resource Extraction; logging and sawmilling</td>
<td>Sawmill including steam engine, steam boiler, a water well, the remnants of a 2-room log cabin, 9 stacks of milled lumber and logs, a power take-off assembly and associated equipment</td>
</tr>
<tr>
<td>MMK-094 B-2</td>
<td>Habitation Site; expedition base camp</td>
<td>Base camp from first successful ascent to the summit of Mt.McKinley; Karstens and Stuck 1913 expedition). Site consists of a rectangular stone tent foundation, tent pole fragments, and associated artifacts</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>MMK-095</td>
<td>Stampede Trail</td>
<td>Transportation Site; trail</td>
</tr>
<tr>
<td>D-6, D-5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMK-099</td>
<td>Kantishna</td>
<td>Mining Community</td>
</tr>
<tr>
<td>C-2</td>
<td>(Eureka)</td>
<td></td>
</tr>
<tr>
<td>MMK-100</td>
<td>Habitation Site; cache</td>
<td></td>
</tr>
<tr>
<td>C-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MMK-114</td>
<td>MMK-044</td>
<td>Placer Mining Camp; hydraulic mining</td>
</tr>
<tr>
<td>C-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site #/ Map Quad</td>
<td>Previous/Other Designations</td>
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<tr>
<td>MMK-115 D-4</td>
<td></td>
<td>Habitation Site</td>
</tr>
<tr>
<td>(no AHRS#)</td>
<td>MOMC-79-003</td>
<td>Habitation Site; trash scatter</td>
</tr>
<tr>
<td>(no AHRS #) Healy C-4</td>
<td>DENA-81-005</td>
<td>Historic Gravesite</td>
</tr>
<tr>
<td>(no AHRS #) Healy C-4</td>
<td>DENA-81-006</td>
<td>Habitation Site; trash scatter</td>
</tr>
<tr>
<td>(no AHRS #) Healy C-4</td>
<td>DENA-81-007</td>
<td>Historic Gravesite</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>(no AHRS #) Healy C-4</td>
<td>DENA-81-009</td>
<td>Habitation Site; cabin</td>
</tr>
<tr>
<td>(no AHRS #) Healy C-6</td>
<td>DENA-81-011</td>
<td>Transportation Site; equipment (sled)</td>
</tr>
<tr>
<td>(no AHRS #) Mt.McK. B-1</td>
<td>DENA-81-012</td>
<td>Habitation Site; ARC camp</td>
</tr>
<tr>
<td>(no AHRS #) Healy C-4</td>
<td>DENA-82-017</td>
<td>Habitation Site; ARR camp</td>
</tr>
<tr>
<td>Site #/Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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</tr>
<tr>
<td>(no AHRS #) Healy C-4</td>
<td>DENA-82-018</td>
<td>Habitation Site; ARC camp</td>
</tr>
<tr>
<td>(no AHRS #) Healy C-4</td>
<td>DENA-82-019</td>
<td>Habitation Site; trash scatter</td>
</tr>
<tr>
<td>(no AHRS #) M.McK. C-2? Spruce Creek Cabins</td>
<td>DENA-82-027, Spruce Creek Cabins</td>
<td>Habitation Site; cabin group</td>
</tr>
<tr>
<td>(no AHRS #)</td>
<td>DENA-83-004</td>
<td>Habitation Site; cabin ruins</td>
</tr>
<tr>
<td>(no AHRS #)</td>
<td>DENA-84-005, Eielson Cabin</td>
<td>Habitation Site; cabin</td>
</tr>
<tr>
<td>(no AHRS #)</td>
<td>DENA-84-006, Savage River Cabin</td>
<td>Habitation Site; cabin</td>
</tr>
<tr>
<td>Site #:/ Map Quad</td>
<td>Previous/Other Designations</td>
<td>Site Type</td>
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<td>------------------</td>
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</tr>
<tr>
<td>(no AHRS #)</td>
<td>DENA-84-007, Pearson Cabin, Toklat Ranger station</td>
<td>Habitation Site; cabin</td>
</tr>
<tr>
<td>(no AHRS #)</td>
<td>DENA-84-008, Sanctuary River Cabin</td>
<td>Habitation Site; cabin</td>
</tr>
</tbody>
</table>
APPENDIX B

Annotated List of Archeological Sites,
Denali National Park and Preserve

Due to the sensitive nature of archeological site information, Appendix B has been deleted from copies of the Overview and Assessment that are intended for public distribution.
This appendix accompanies the Ethnographic Overview section of the DENA archeological overview and assessment. It provides information on language, territory and seasonal activities specific to the Athabaskan groups surrounding DENA. The subsistence cycle and territories of the aboriginal period are portrayed as best can be culled from ethnographic, ethnohistorical, and oral sources, but a cautionary note must accompany the reconstruction of aboriginal lifeways; refer to the Ethnographic Overview section for an explanation of the limitations and constraints on such reconstruction and a discussion of northern Athabaskan material culture, religion, and social organization.

The Tanaina

Language and Territory

Tanaina inhabited the Cook Inlet region of southcentral Alaska. Their territory included inland areas reaching into and sometimes beyond the southern Alaska Range all the way from Iliamna Lake to Broad Pass on the Chulitna River. One feature of the Tanaina’s coastal adaptation was their exploitation of marine mammals. The degree of exploitation, along with dialect differences, provides the basis for subdividing the groups living around the lower Inlet, called Lower Inlet Tanaina, from those of the upper Inlet (Fall 1987:5). The territory of some Upper Inlet Tanaina reached to DENA; these groups will be of particular interest to DENA readers.

The Upper Inlet Tanaina inhabited the northern part of Cook Inlet west to Rainy Pass in the Alaska Range, east to the Chugach Mountains, and up the Susitna River in the north to the Talkeetna Mountains and the Alaska Range. They may have entered the area about 1,500 years ago via the Alaska Range around Rainy Pass (Kari and Fall 1987:13). Some groups centered their subsistence activities near the coast to take advantage of the marine mammals and salmon; seasonally they traveled inland to hunt.
large game (Fall 1987:35). The farther from the coast the Tanaina lived, the greater was their dependence upon inland resources such as moose, caribou, sheep, small game, freshwater fish and furbearers.

The Upper Inlet Tanaina groups utilizing lands closest to the southern Alaska Range near DENA were called: Yentnuht'ana, "backbone river people", the Dashq'eht'ana, "people on the bar", and the Dghelay Teht'ana, "mountain people" (Kari and Fall 1987:26). The name the Tanaina applied to themselves was Dena'ina, "the people" (Townsend 1981:638). Many passes and mountains in the Alaska Range were known and used by them; these place names have been recorded--as best remembered by the few surviving Tanaina elders--in Shem Pete's Alaska (Kari and Fall 1987).

The Yentnuht'ana's territory encompassed the Yentna and Kahiltina river drainages to the mountains, where caribou and sheep were hunted; not far away was Rainy Pass, which was the abrupt border with the Upper Kuskokwim Kolchan Athabaskans. Well-known trails to the mountain passes were named after the group most prone to use them. Native place names indicate the Yentnuht'ana were familiar with numerous mountains and glaciers in the immediate Alaska Range. They discouraged at least one early explorer from using the impassable Yentna Glacier on a northward quest. Another important feature in Yentnuht'ana territory, and in legend, was Chelatna Lake, high in the foothills (Kari and Fall 1987:123,130,134,143-144).

The territory of the Dashq'eht'ana ranged along the middle of the Susitna River from the Yentna to Talkeetna rivers. Caribou were hunted seasonally beyond these borders in the mountains near the Tokasitna River or toward the Talkeetna Mountains. A band, village, and geographical name that is synonymous with the Dashq'eht'ana is Kroto Creek (Fall 1987:35; Kari and Fall 1987:26,152).

The Dghelay Teht'ana, "mountain people", inhabited the region of the Talkeetna River drainage, northwest across the Susitna and Chulitna rivers to the Alaska Range. People from downstream on the Susitna River would also come to the area to hunt, but apparently would not go beyond Broad Pass (Kari and Fall 1987:180). Place names confirm the head of Chulitna River around Broad Pass was a hunting area that was familiar to the "mountain people", as were the glaciers that descend from Denali.

Certain glaciers were considered somewhat safer than others. When these were crossed, bundled-up grass was used to mark the safest route for subsequent travelers. Other glaciers were clearly avoided (Kari and Fall 1987:174,177-8,180).

The Dghelay Teht'ana were a mixed band consisting of Tanaina and Ahtna who are believed to have migrated into the Talkeetna River area from the upper Susitna River in the early nineteenth century. The Ahtna consider these "mountain people" to be a small clan within their society. There are several different stories regarding the origin of this group (Kari and Fall 1987:173). As might be expected, the northeast linguistic border
of this group was not distinct, but rather was a blend of features from both Ahtna and Tanaina, with the Ahtna language dominating (Kari 1977:288).

The Lower Tanana Athabaskans were a third group who shared the northeast border of the Tanaina/Ahtna territory. Broad Pass appeared to be the limit of range for the mixed Tanaina-Ahtna band. However, there was a well-traveled route in this area (later to become the path of the railroad) that was used for trading and visiting purposes between the coastal Tanaina and Lower Tanana Indians (Kari and Fall 1987:180; Gudgel-Holmes 1988).

Seasonal Round and Settlement Patterns

The Tanaina were unique among Alaskan Athabaskans in their adaptation to the coast and the harvest of marine mammals. Their diverse assortment of subsistence resources also included large game from inland areas and rich runs of anadromous fish (Fall 1987:6). Groups living closest to the coast participated in subsistence activities oriented more toward coastal resources than did Tanaina farther inland. Time spent securing salmon, eulachon (hooligan), and marine mammals was greater than that spent on hunting trips for large game. The coastal products were then traded to inland Tanaina for meat and skins (Fall 1987:32-33).

The inland Tanaina seasonal cycle did not include hunting for marine mammals, but instead stressed harvesting of caribou, bear, moose, furbearers, and salmon. Salmon resources dwindled the farther one traveled inland, to the point where some Tanaina (and other Athabaskan) groups lacked good access to salmon runs; in such cases freshwater fishing was stressed instead. Trade with more coastal-dwelling groups was important in these situations in order to supply resources unavailable inland; conversely, trade benefitted coastal dwellers with inland products.

The following example of the annual cycle of inland Tanaina illustrates the resource variability within the territory and each group's adaptations to the situation.

Spring. Spring was the time for trading with the coastal Tanaina. The Dashq'eh't'ana of the middle Susitna River and the Yentnuht'ana of the upper Yentna River region traveled to the mouth of the Susitna where a meeting resembling a trade fair took place. They exchanged their winter's catch of furs (some of which had been made into blankets and clothes), skins, caribou, bear, and beaver meat for dried salmon and hooligan, seal meat and skins, beluga, and especially oil from these marine mammals. Trading might continue for several weeks before the visitors returned to their main winter settlements (Fall 1987:34-35).
Inland groups not traveling to the coast were engaged in other subsistence activities. Spring was often a season of meager food supplies. Freshwater fish, such as trout, were a primary food source that could be counted on to ward off starvation until the salmon returned. Spring campsites were selected from among many favorite and productive spots, such as at the outlets of lakes where trout passed on their migration downstream. Trout were taken in fish traps, weirs, or dip nets; what wasn’t consumed immediately was dried and stored (Kari and Fall 1987:137,138,167; McKennan 1981:566). Bears were hunted as they came out of hibernation, but could only be eaten by men and old women because of religious beliefs (Nelson 1983:182-183). In some areas fur-bearers were taken well into the spring, especially beavers which were prized for the meat as well as the fur (Fall 1987:32-33). Migratory waterfowl began to appear in April and May. Undoubtedly ducks, geese, and eggs were taken if habitat near spring camps was favorable, but such data are lacking for inland groups.

**Summer.** Summer was the time to harvest fish for inland groups whose territory supported salmon runs. The Dghelay Teht’ana, "mountain people", harvested red salmon at the limit of the salmon run along the upper Susitna and Indian rivers (Kari and Fall 1987:187). Fish camps could be located all along vital streams or lakes. These fishing settlements, to which the Tanaina returned year after year, were usually not far from the main winter village or the freshwater fishing camps of spring. Smokehouses were built to dry the fish; they also provided a mosquito-free, albeit smoky dwelling for the fishermen. Early king salmon runs, where they existed, were especially important to groups who habitually suffered from a "hungry" spring. Later runs of red and silver salmon also occurred in most inland territories, although large game hunting in the foothills took precedence over the late silver runs (Fall 1987:29,35).

Salmon were taken in several ways: basket traps with holes sized to capture larger fish were set in streams; weirs were constructed across streams which funneled the fish into a central trap; drag nets were used to force the fish toward shore where they were clubbed; dip nets and spears made of antler were also used (Kari and Fall 1987:136; Osgood 1966:28; Townsend 1981:626).

Everyone was involved in the labor intensive business of fishing. Timing was critical because of the short duration of some runs and the need to secure a significant portion of the annual food supply. Preparations included building the traps, weirs and drying racks, plus collecting wood to dry or smoke the fish. Following this came the relentless and rigid schedule of capturing, cleaning, drying, smoking, storing, and transporting the fish. Both sexes and all ages were involved in the process. But even with full cooperation of the group, food shortages might occur because of uncontrollable events: wet weather could prevent the fish from drying properly; the salmon could simply not appear; high water could wash away the weirs (Fall 1987:32,34; Osgood 1966:29).
Silver salmon runs occurred in August. Groups who had already left for the fall hunting grounds might collect and dry additional salmon along the way. These "fall hunts" actually began in the latter part of summer for certain groups. For others, caribou hunting may have been a summer activity at places near Curry Ridge (Fall 1987:34; Kari and Fall 1987:175,187).

Fall. Toward the latter part of August, Tanaina began their fall hunt. The Yentnuht'ana hunted caribou and sheep toward Rainy Pass. Men and women traveled by canoe as far as the rivers would allow. If the opportunity presented itself, the group fished and hunted near where the canoes were cached before continuing on foot along the trail to the main hunting area. Game was taken with bow and arrow, or snared in the caribou fences. Some fences apparently extended for several miles. Hunters also speared caribou from canoes as the animals swam in lakes, such as Chelatna Lake. Women air-dried the meat, which preserved it and reduced the weight of the returning load; sometimes they helped with the caribou drives. They also snared squirrels and marmots, and collected berries which were then preserved with grease in birchbark baskets. At other times they did not continue on to the caribou fences, but stayed behind to snare small game and collect berries (Fall 1987:34-35; Kari and Fall 1987:23,126;145).

Some Tanaina might continue over the Alaska Range, toward the Jones and Dillinger rivers on the South Fork of the Kuskokwim River to trade with Upper Kuskokwim people. Furs were a primary trade item in the 1800s, most likely because of the Tanaina’s desire to resell them for a higher price at the Russian trading posts (Kari and Fall 1987:129-130). But disagreements eventually arose, and the Upper Kuskokwim terminated their trade with the Tanaina.

At one time there was a year-round Tanaina village somewhere near Rainy Pass. It may have supported many people who were specialists in caribou hunting. This group, who traded with other Tanaina for other necessary supplies, built and maintained caribou fences and surrounds in the pass (Kari and Fall 1987:1278).

When fall hunting was completed, people floated down the rivers in boats constructed of the new hides. They traveled just before freeze up to rejoin other band members who had remained behind. Together they all moved on to the winter village. The Kahiltna River was one river that was too swift to navigate (in either direction), so Tanaina hunting in that area brought their supplies back after freeze up by sled (Fall 1987:35).

The Dghelav Tehť'ana followed a similar hunting pattern. Some bands of this group hunted right up to the glaciated areas of the Alaska Range west of the Chulitna River, while others frequented the Talkeetna Mountains. They built caribou surrounds and snared small game. Some even traveled to Ahtna territory near Susitna Lake and Tangle Lakes to hunt caribou and trade. Before freeze up they constructed their skin
boats to carry themselves, dogs, and supplies to their winter settlements. A "lookout" would be stationed in the bow with a pole to test the channels for navigational hazards. After the boat had served its purpose the green skins were taken apart and tanned (Fall 1987:35-36; Kari and Fall 1987:177).

**Winter.** Winter was spent at permanent village sites which, for inland groups, were often located near outlets of good fishing lakes. "Mountain people" far inland may not have had permanent villages, however (Kari 1977:278). Villages usually consisted of four or five semisubterranean log houses called nichi' in which several related families lived (Fall 1987:29). The storage caches, filled with supplies gathered during the summer and fall, fed the village for several months. During this time the Tanaina could engage in more leisurely pursuits such as potlatching and visiting; the name for the months of November and January--"visitors" and "singing"--reflects these activities (Fall 1987:33).

Winter was also the time when Inland Tanaina traded with coastal groups again. They brought their fur blankets, made from different kinds of animals, and their highly valued dentalium shells, acquired from the Tlingit by way of the Ahtna. These were traded for dry fish and especially sea mammal oil (Fall 1987:35).

Certain village locations were particularly valuable because of their proximity to year-round resources. Hewitt Lake in upper Yentna territory was such a place. Not only was it a base camp close to the mountain hunting range, it was also a permanent village site that supplied salmon, freshwater fish, and furbearers (Kari and Fall 1987:136).

When supplies began to run low after the first of the year, smaller groups dispersed to nearby lakes for freshwater fish; trained dogs helped locate bears in their dens, and hunters scoured their hunting territory for game, large or small. Men returned to the caches along the trails to bring in the supplies stored there. In especially needy times, food was obtained from other villages (Fall 19897:33).

Furbearers were caught throughout the winter. In aboriginal times they may have been trapped near the main village. But later when fur was "big business", highly productive, individually-owned traplines farther from the village were maintained. Fur trapping and snaring may have continued well into spring near lakes that supplied the all important freshwater fish for the difficult season just before the salmon returned.
Language and Territory

The Ahtna are often equated with the Copper River, which is the largest drainage in their territory. In the early nineteenth century the Ahtna region extended north and west from near the mouth of the Copper River. The Wrangell Mountains marked the eastern border of Ahtna territory; the plateau and drainage basins of the Matanuska, Talkeetna, and Susitna rivers marked the western border (de Laguna and McClellan 1981:641). The area east and southeast of DENA was not claimed by Ahtna until the mid to late 1800s; before that time it was considered the territory of the Tanaina or the Lower Tanana-speaking Athabaskans.

There were four dialects within the Ahtna language that roughly paralleled the geography: Lower, Middle, Upper, and Western Ahtna (Kari 1977:276). The Hwtsaay Hwt'aene, "little timber people" were a band of Western Ahtna who apparently moved fairly recently into the upper Susitna and upper Nenana river drainages.

In the middle of the nineteenth century Hwtsaay Hwt'aene advanced from their core territory--near Tyone Lakes and the Gulkana River drainage--westward into areas inhabited by Tanaina and Lower Tanana people. As late as 1830, the upper Nenana River was still considered Lower Tanana territory; the Oshetna River belonged to the Tanaina (Kari and Fall 1987:26,173,185,191; Kari and Kari 1985:75). The border separating the three Athabaskan groups was not distinct, but represented a common (but at times uneasy) hunting zone (de Laguna and McClellan 1981:641).

In historic times, Western Ahtna territory extended roughly from the Susitna and Chulitna rivers in the west to the Maclaren River in the east (Kari and Kari 1985:5). The southern border in the Talkeetna Mountains was shared with the Tanaina; the northern border at the Nenana River and Yanert Fork intersection was uneasily shared with Lower Tanana people.

The Tanaina language became more understandable to the Ahtnas over time, due to social interaction, even though they lived closer to the territory of Tanana speakers in the upper Nenana River area (Kari 1977:288; Kari and Fall 1987:181). This implies there was more positive interaction between the Ahtna and Tanaina than there was between the Ahtna and Lower Tanana in this region. The presence of an abrupt language boundary combined with oral accounts confirm the presence of friction between the Lower Tanana Indians and the Western Ahtna near the Alaska Range (de Laguna and McClellan 1981:642; Kari 1977:288; Peters and Peters 1977).
Conflicts over hunting territory and access to furs prompted a "war" between the intruding Western Ahtna and Lower Tanana people in about 1865. Hostilities took place southeast of Butte Lake when miscommunication occurred between Nenana River hunters and a rich Tyone Lake chief who had come bearing gifts in an attempt to reach a settlement. The result ended the Lower Tanana's claim to the region (H. Peters 1977:17; Tansy 1984).

Three bands of Western Ahtna existed in historic times. Grouped by speech communities, they were: Talkeetna (composed partly of Tanaina), Tyone Lake, and Cantwell-Denali (de Laguna and McClellan 1981:642,643; Kari and Kari 1985:5). The inclusion of the word "Denali" in the name of the Cantwell-Denali band does not refer to Denali Park but rather to the mining settlement at Valdez Creek southeast of the Park. It is conjectured the Cantwell-Denali group did not inhabit their region year-round until the wage economy of the railroad and mining drew them permanently to Cantwell and Valdez Creek earlier this century. However, the presence of old native trails and native place names lends support to the belief this area has a long tradition of use by Ahtna people, at least on a seasonal basis (Dessauer and Harvey 1980:26,83-84; Kari and Buck 1983). According to oral and genealogical evidence, the composition of the Cantwell-Denali band included people originally from the Tyone Lake area (and eastward) who seasonally used the upper Susitna River region long before the miners arrived (Reckord 1983:171; Tansy 1984). There also may have been a small band who stayed year-round in what is now the Cantwell-Denali region. This group centered their subsistence activities around Valdez Creek whose native name fittingly means "abundant-game creek" (H. Peters, 1989 personal communication).

The major difference between the three bands was the first two had access to salmon while the latter was primarily a group of large game hunters (Reckord 1983:30). Before the Cantwell-Denali group permanently established themselves northwest of Tyone Lake however, they acquired salmon at the Gulkana River. Their movements within their aboriginal territory are not well-known, but some of their major hunting and fishing sites were, according to place name information, located at Tyone Lake, Butte Lake, Susitna Lodge vicinity, Roosevelt Lake, and Snodgrass Lake. At some point in time, perhaps after their advance into the upper Nenana River region, Ahtna territory expanded to encompass the Nenana glacier, Pyramid Peak, Wells Creek, Jack River, Carlo Creek, Yanert Fork, Riley Creek, and Healy River (Kari and Buck 1983:map).

Seasonal Round and Settlement Patterns

The Western Ahtna's movement into territory held by Lower Tanana Athabaskans may have been prompted by the desire to participate in the Russian fur trade. Relatively little information is available on these "little timber people" or their seasonal cycle. Any
attempt to outline their aboriginal subsistence patterns will be colored by the influence of the fur trade economy. The Cantwell-Denali cycle can only be described for the historic era around 1900. Before then, the territory that would become the Cantwell-Denali’s was used by Tyone groups on a seasonally basis. Because information about this eastern DENA area is so slim, the seasonal cycle of both groups (Cantwell-Denali and Tyone) is included here even though one relates to the historic period.

The three principal Western Ahtna groups (Talkeetna, Tyone, and Cantwell-Denali) were primarily large game hunters who subsisted on the herds of caribou that roamed the vast tundra area west of the Gakona River to the Alaska Range. They also exploited sheep, beaver, muskrat, porcupine, lynx, ground squirrel, grouse, waterfowl, bear, moose, freshwater fish, berries and other plants. Salmon were taken when access allowed or through trading (de Laguna and McClellan 1981:648; Reckord 1983:25).

Salmon were not available to the Cantwell-Denali Ahtna and moose seem to have been absent from portions of the Western Ahtna region for an undetermined period of time. Caribou and freshwater fish were obtained as substitutes for these resources. Other Ahtna viewed this not only as disadvantageous, but also as inferior. Within the last few years, one Lower Ahtna person even refused caribou and whitefish at a potlatch saying they were fit only for dogs (Reckord 1983:30-31). Figure 10 portrays the generalized subsistence cycle for the Cantwell-Denali group, which can be considered very generally representative of the non-salmon subsistence pattern.

Spring. "Small timber people" were favorably located to participate in the Tanaina spring trade fairs at Cook Inlet. Some Western Ahtna became middlemen in this network that funneled furs from the interior to the south. They reached the coast by way of either the Matanuska, Chickaloon or the Susitna rivers (Kari and Fall 1987:190; Reckord 1983:30,179).

Members of the Tyone group who did not travel to the coast could capitalize on the spring caribou migration at places near Swampbuggy Lake, or several spots close to their winter village near Tyone Lake (Tansey, 1984 personal communication). The general vicinity south and east of Swampbuggy Lake (Lake Creek area), frequented since prehistoric times, was favored for a variety of other spring resources, including beavers and fish. Goose Island, a large island in the Susitna River not far from Swampbuggy Lake, contained lakes where muskrats, whitefish, and migrating ducks could be taken (H. Peters 1985, 1989 personal communication; Reckord 1983:177).

Bears may have been another spring resource taken in aboriginal times, especially when other food was scarce. They were taken with a stout birch spear and a copper or bone point. Historically however, they do not seem to have been exploited. The all-around staple resource, moose, did not appear in the Cantwell-Denali area in numbers until about 1930; but they were available north of the region, in the Alaska Range on the Yanert Fork, where the Ahtna hunted upon completion of their spring activities (H.
It is not known if the Western Ahtna suffered from famine in the late winter and spring as did other Alaskan Athabaskans. Caribou herds may have provided a resource plentiful enough to sustain them, and at times, impoverished people from other areas (de Laguna and McClellan 1981:648; Reckord 1983:24,36). There are hints in the oral record though, that difficult times did occur and that small game, especially porcupine, supported them (J. Peters 1985). The Talkeetna and Tyone groups' resource base also included salmon, but the degree of hardship they may have experienced is not known. Abundant freshwater fish from Tyone Lake were a vital resource that supported the people at this ancient village site during spring and fall. Two very large fish traps apparently took enough fish annually to form a cube eight feet on a side (Reckord 1983:34).

The Ahtna name of a creek at the outlet of Little Lake Louise, "We-gather-birch-sap-creek", supplies information on a spring and summer activity (Kari and Buck 1983:73). In the same way sap is collected from maple trees, birch sap is collected from a hole drilled into the tree. Another method required peeling some of the bark and scraping the sap with a knife. The sap was consumed fresh and also used as a medicine on boils or sores (P. Kari 1987:46). A Lower Tanana man mentioned, in reference to hunting during the lean spring season, that birch and cottonwood sap tasted like watermelon (George 1988:21).

**Summer.** The threat of a late first run of salmon was critical for the Talkeetna and Tyone groups. They established camps at small streams and lake outlets where the salmon were taken with fish traps. The Talkeetna group fished in Chunilna Creek, Stephan Lake, and perhaps in the middle Susitna River (Kari and Kari 1985:5). The Tyone Lake people obtained salmon in the Gulkana River. Some salmon were consumed while fresh, but most were dried on racks with green alder smoke, and stored in caches with good air circulation to prevent rotting. A rainy season, blowflies, or a late summer crop of wasps could spell disaster at any time for this vital winter reserve (Florence Collins 1974 personal communication; de Laguna and McClellan 1981:647,649; Reckord 1983:26). Most Ahtna rendered fish oil from the heads and then stored it in fish-skin bags; it is not known if Western Ahtna followed this pattern. Geese and ducks could be snared in tall grass where good waterfowl habitat existed (de Laguna and McClellan 1981:648-649; Selkregg 1977:223).

People who remained at the Tyone Lake village in the summer maintained a long bridge or dock that extended far into the lake. During the warmer months, the bridge was used to position fish traps to capture the outward migrating freshwater fish, as well as the inward migrating population coming from the connecting lakes (H. Peters 1989 personal communication).
Western Ahtna, Cantwell-Denali Group
Aboriginal Subsistence Cycle

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Figure 10. Cantwell-Denali Subsistence Cycle.
The Yanert Fork of the Nenana River was a favored spot where the Cantwell-Denali Ahtna hunted caribou and a few moose in the summer (Tansy 1985). They traveled to Yanert Fork by foot through the mountains from their spring camps accompanied by their dogs who carried up to 40 pounds in dog packs. Five dogs could carry the meat and skin of one caribou; every person owned a couple of dogs (Tansy 1985).

Dwellings at summer camps consisted of brush, bark, moss or skin-covered shelters often built facing each other with a fire between, and drying racks. Brush for firewood and water were close to the camps; but, sites were situated away from timber in windier areas to provide relief from insects and to dry the meat and fish. Generally, Western Ahtna camps and villages were located close together within the heart of the main hunting territory centered around caribou migration routes (de Laguna and McClellan 1981:645; Reckord 1983:81; VanStone 1974:34).

There were many tasks to be done at hunting camps and these were usually divided according to sex. Women dried the meat, tanned the skins, and sometimes, if they were without children, actually helped with the hunt. They always collected berries and other vegetable foods that ripened in late summer (Reckord 1983:27). Men primarily hunted, but occasionally helped scrape skins to expedite the return trip.

Interregional trading occurred in summer, as well as spring, for Western Ahtna. This time it was the Tanaina and Lower Tanana who traveled the farthest. With vital summer fishing duties left to the remaining group members, they traveled by foot along the Susitna and Nenana rivers to a central meeting place in the Western Ahtna area, probably at Butte Lake or Lake Susitna (Lake Louise). Other Ahtna groups brought trade items such as precious copper, iron wedges (probably acquired in Canada), and other goods (Davydov 1977:199; de Laguna and McClellan 1981:650-651; Kari and Fall 1987:193).

Copper was an important trade item for Lower Ahtna, especially during the Russian fur trade era. It was exchanged for furs from groups farther inland, which in turn were traded on the coast for European goods (Shinkwin 1979:37). The Tanaina remained for the summer, hunting caribou, before returning to the coast in the fall (Kari and Fall 1987:194). It is not known if all Western Ahtna groups participated in this trade, however, statements by elderly Cantwell-Denali people indicate they did not (J. Peters 1985). Perhaps trading had ceased before these elders were born.

Trading fairs were commonly held throughout Ahtna territory. Exact locations of these fairs are unknown except by general areas. It is known they were scattered across the region at strategic spots conducive to drawing other Athabaskans and perhaps even Eskimos. The site of one late summer fair, held near Isabel Pass, was probably chosen because of the plentiful caribou resources that facilitated the gathering of large groups. A parallel situation was at Butte Lake. The participation of the Lower Tanana people from Wood River-Toklat area in the trade network is poorly understood. It is expected
that they reached Butte Lake via the Nenana River and Yanert Fork (Reckord 1983:53).

**Fall.** The Ahtna called September "first month". Fall (and part of August) was traditionally a time for large game hunting and gathering of plant foods. The Talkeetna group hunted in the mountains as far as Indian Creek and along the Talkeetna River. The Cantwell-Denali people re-crossed the mountain passes from Yanert Fork to continue caribou and sheep hunting near the end of the Susitna or West Fork glaciers. Caribou, who congregated there to avoid insects, were especially desirable this time of year because of their winter store of fat. Five or six families would camp together and wind-dry the meat on open racks before transporting it by skin boats to winter settlements (Tansy 1985).

One method of capturing sheep capitalized upon the Ahtna's knowledge of sheep behavior. Teams of hunters stationed themselves above the sheep while others below frightened the animals who then instinctively fled upwards into the arrows of the waiting hunters. Another method involved spearing the sheep after channeling them along stone fences (Reckord 1983:24-25).

Major fall caribou drives were held at Butte Lake. The lake has a long history of prominence in the seasonal round of the Cantwell-Denali group, as well as for the Tyone groups and even Lower Tanana Athabaskans of the nineteenth century. A hunting camp might consist of a few dozen people spread out in separate locations along the lakeshore near the inlet. Poles for the drying racks had to be cut and hauled to the area from lower elevations (Tansy 1984).

The caribou were channeled toward the lake along a fence made of poles. The poles, about as tall as a man, were not continuous, and the animals could have crossed the fence at any time. However, it is a characteristic of caribou behavior to follow linear features rather than crossing them. Caps of moss were stuck on the poles to represent humans; women and children filled in between the poles to keep the animals moving. Once the caribou were well into the lake, the concealed hunters would paddle out and spear them. Rather than risk injury from a wounded animal, the dead, floating animals were towed to shore later (H. Peters 1985; J. Peters 1985).

Everyone helped butcher the meat during a caribou drive, including scraping the skins (Tansy 1985). After the meat was dried, what could not be immediately packed or floated to the winter settlements was cached. The Cantwell-Denali band transported their supplies to the Valdez Creek area; the Tyone people traveled to Tyone Lake (Kari and Kari 1985:67; Tansy 1984).

There were many kinds of caches. There were temporary and permanent underground caches and short-term rock caches. Some authorities report caches were shared with other families, with each family assigned to a certain portion of the cache; while others say they belonged to specific women, with the location sometimes guarded from other
group members (J. Peters 1985).

Other fall activities included the gathering of berries, fat ground squirrels, ducks, and any other small game. A winter supply of Indian potatoes was collected from mice nests or dug up with sticks (de Laguna and McClellan 1981:648). Freshwater fish taken late enough in the fall could be frozen. Excess supplies were always cached for winter.

A rather unusual food preservation method practiced by some Western Ahtna involved salmon eggs. The eggs were stored in caches that looked something like beaver houses. The caches would freeze, drying the eggs which were then preserved for up to several years (Kari and Fall 1987:192).

Winter. Many Western Ahtna groups like the ones at Tyone Lake spent much of the winter in permanent settlements located along lakeshores. Sometimes however, Tyone people spent the winter hunting; one winter hunting spot was near Brushkana (H. Peters 1989 personal communication). It is suspected there may have been a small band of Ahtna associated with the Valdez Creek area who always spent the winter in the upper Susitna or Maclaren river region in the mid to late 1800s; but they were not part of the Cantwell-Denali band who lived there later (H. Peters 1989 personal communication). Villages contained up to nine families in semisubterranean houses scattered over an area of several miles (de Laguna and McClellan 1981:644; Reckord 1983:76). Some of the major settlements are believed to have been situated at Lake Louise, Clarence Lake, Stephan Lake, and the large one at Tyone Lake noted above.

The Cantwell-Denali and Talkeetna Ahtna may have lived in less permanent camps during their winter pursuit of caribou. William Dickey, an early explorer, reported that Ahtna hunted all winter and slept nearly in the open even in the coldest of weather with only a skin reflector set next to bonfires (Kari and Fall 1987:187). This was most likely an observation of a temporary camp of adult hunters (Janes 1989:129); although Cantwell-Denali elders recalled living under very mobile conditions in portable skin-covered tents in the winter because they were always on the move. They report they never lived in semisubterranean houses, as did the people at Tyone Lake. Some semblance of winter settlements existed for the Cantwell-Denali people however, because families would make their winter camps where stray caribou could be snared all season (H. Peters 1985). The log cabin became the standard dwelling for the native community that sprang up near the Valdez Creek mining town after 1903 (Reckord 1983:172).

It is not known if the Cantwell-Denali band enjoyed the early winter activities of potlatching and visiting of distant groups to the same extent as did the Tyone and Talkeetna groups. Their frequent winter movements, until the introduction of dog traction, may have hampered extensive participation. People at Tyone Lake however, would travel at least every three or four years to the Cook Inlet region to visit, and
trade their caribou meat, furs, and perhaps dried freshwater fish for dried salmon and ammunition. They began their travels in the fall and did not return until spring. The extent of such trips before the advent of Russian trading posts is not known (H. Peters 1989 personal communication).

Small, widely separated groups were required in order to take furbearers. These were secured by snares, deadfalls, pitfalls, bow and arrow. Many ritual observances accompanied furbearer hunting (de Laguna and McClellan 1981:646-648). Animals that were taken for the Russian fur trade business included marten, ermine, mink, river otter, wolverine, and muskrat (Reckord 1983:25-27). Little is known about the timing of the aboriginal Western Ahtna's fur trapping activities except the Tyone group would sometimes trap in the Gulkana area and the Cantwell-Denali band found foxes plentiful in the late fall near Snodgrass Lake (H. Peters 1989 personal communication). The coats of some furbearers are prime in early winter, but can also be taken in early spring, when easier circumstances prevail.

As winter progressed, small game, freshwater fish and especially porcupine became increasingly important in staple diet. Basket traps set under lake ice produced plentiful trout, lingcod, whitefish, and grayling (H. Peters 1985). Women snared hares close to the winter camp (de Laguna and McClellan 1981:647-648; Reckord 1983:27). Ptarmigan were taken all year round.

The Lower Tanana

Language and Territory

Indians of the lower Tanana River were part of a larger cultural and language family earlier referred to as Tanana that stretched along the Tanana River from almost the headwaters to near the mouth. Intelligibility between dialects decreased as the distance between them increased, but the term "Lower Tanana" is used to designate the independent groups that share a language and geographical area from the Goodpaster River to Tolovana. In the early nineteenth century, the downstream boundary of the Lower Tanana may have extended to the mouth of the Tanana River; it is recognized that Koyukon-speaking Athabaskans migrated into the territory sometime in the 1800s (McKennan 1981:563). Russians never directly contacted the lower Tanana region, but the Tanana language contains several dozen Russian words (Krauss and Golla 1981:76). The most likely route of this influence was from the upper Kuskokwim area.

The Lower Tanana dialect groups most closely associated with DENA in historic times
were Wood River, and Nenana-Toklat. Information on the limits of their territories and seasonal movements is scarce. Precise boundaries probably did not exist for these and other Athabaskan bands, but were flexible, adjusting to resource and social needs of the group. It is known however, that the southern boundary of both bands extended to the Alaska Range into territory disputed by the Western Ahtna (de Laguna and McClellan 1981:641).

The Wood River band area probably included the drainage of the Wood River from its mouth on the Tanana River to the headwaters. The western border likely extended almost to the Nenana River.

The Nenana-Toklat territory stretched along the Nenana River into the Alaska Range. In the early nineteenth century, this southern border included the upper Susitna River. The western border may have extended from the mouth of the Tolovana River, up the Kantishna River to the Toklat River mouth and then up that river into the mountains (McKennan 1981:564). The Toklat ("headwaters") River was a vital trade route that linked Indians from the deep interior to Cook Inlet judging from an early Russian map (1839) that noted a village at "headwaters mouth" (Kari and Fall 1987:35,195; McKennan 1962). To the west and north of the Toklat River lay the Koyukon Athabaskans. According to oral accounts, distinct borders did not appear on this front, at least not in the early twentieth century. Before the Koyukon infiltrated this region, the Lower Tanana Indian territory may have extended up the Kantishna River, coalescing with the Upper Kuskokwim Athabaskans of that region, with whom they shared a partially understandable language.

The resource base of the groups inhabiting the lower and middle Tanana River included salmon (which wasn't available farther upstream), other freshwater fish, large game and furbearers. Groups ranged in the course of a year from the Tanana River through low-lying areas to the foothills of the mountains. They traded with other Athabaskans as far away as Cook Inlet or, more frequently, at trading fairs that were held each summer at the mouth of Tanana River; they socialized most often with groups around Minto, Tolovana, and up the Kantishna River.

A few Lower Tanana place names near DENA have been recorded for the Mt. Margaret and Mt. Wright areas, plus at Otto Lake and Dry Creek just north of the Park, and in the upper Toklat River drainage (Kari, 1988 personal communication). This would suggest that a route from the Nenana River via Dry Creek, or the Toklat River was used to gain access to central portions of the Park for large game hunting. One name in the upper Toklat River area, "winter caribou fence", even reveals concrete resource usage. Other Park areas must have been utilized as well, perhaps by unknown Upper Nenana groups entering from the south, but there is too little information to do more than speculate on this.
Seasonal Round and Settlement Patterns

Aboriginally Nenana-Toklat groups, and perhaps Wood River people, traversed the course of the Nenana River into the upper Susitna River to hunt caribou and participate in interregional trade fairs. However, information specific to Lower Tanana groups is so limited or biased toward the economy of the fur trade and twentieth century wage employment that it is difficult to manipulate the information to adequately reflect aboriginal lifeways. Our knowledge of the region comes largely from elders who were born between 1900 and 1920 and as such depicts the customary, but historic, seasonal cycle earlier this century.

The Nenana-Toklat people were a mobile group, moving seasonally between upland hunting and trapping areas and spring/summer camps near the mouth of the Nenana River where salmon were available. A permanent year-round village near the town of Nenana is one of antiquity, but in winter it may have held only the very old and very young, as many of the group were away hunting (Paul George, 1988 personal communication).

After the "war" with the Western Ahtna near Butte Lake in about 1865, the Lower Tanana people vacated the upper Nenana region. It is not known if they shifted their range westward toward the Toklat River as a result of this, or whether the Toklat area was always part of their seasonal focus. If the latter is true, then the Toklat must have been shared at one time with Koyukon from the Cosna River (Wickersham 1938:225).

The Nenana-Toklat and Wood River people interacted frequently with groups around Minto, to the north. There is little difference between their dialects which indicates there must have been intermarriage and regular contact. The most likely location of communication was at spring and summer camps south of Minto Lakes and along the Tanana River.

Figure 11 portrays the seasonal subsistence cycle for the Nenana-Toklat group. This cycle can be considered very generally representative of the subsistence pattern shared by groups with access to salmon.

**Spring.** Spring camps were made among the numerous lakes just to the north of Nenana. Families that had stayed out during the winter relayed their supplies and frozen meat to Nunavak Slough where a trail led toward Goldstream Creek. Although each family had favorite lakes that were respected like private territory, supplies and food, even small game, were shared within the group (George 1988:20).

There were many jobs to be done at spring camp. Before muskrats could be hunted, the canoes had to be recovered or patched. Muskrats were trapped as the
Figure 11. Nenana-Toklat Subsistence Cycle.
melting waters flooded the animals’ tunnels. The site of each trap was marked, perhaps with just a willow stick. Once the animals were caught they were roasted and eaten fresh, or dried. Other tasks included thawing all the left-over winter meat so it could be sliced and air dried for jerky. The rest of the meat and bones were cooked before they spoiled in the warm weather (George 1988:20).

**Summer.** In June people moved their camps in preparation for salmon fishing on the Tanana River or side streams. Dogs and supplies were transported by canoe to the new camps where temporary summer shelters, fish fences and traps were made.

But June was the hardest month to get food because the salmon had not yet arrived. The dried meat from the winter was nearly gone and the dried muskrat was tough, taking two days to soften. During this time pike and whitefish were sought from nearby lakes that were known to yield the needed resources. In addition, sentries were stationed on a hill located across from the old Nenana village (east of present-day Nenana) to watch for moose that sometimes came to a lake about half a mile away. If one was caught there would be a little potlatch, and everyone in the community received enough for at least one good meal; otherwise, people lived on freshwater fish and vegetable foods, such as wild rhubarb (George 1988:20). Migratory waterfowl were captured as they arrived in late April and May.

Before the time of fish wheels (pre-1905) the community built fish traps to take king and chum salmon. Sometimes many people would join to build the trap, sometimes just a few did; but all shared from it. One traditional fish trap site was a slough off the main Tanana River on the other side of an island across from the town of Nenana. People would walk out into the slough in their bare feet and drive posts into the river bed with rocks. Posts were extended all the way across except for one opening which held the fish trap. One family would work the trap one day and another family the next. All food was shared (George 1988:17-18).

Another method of taking salmon was with a dip net from a platform. In an eddy near the old Nenana village was one fishing spot where a platform was built. Posts were driven way out into the water, and logs laid across to form the platform. People fished from it with large dip nets (George 1988:18). By August the salmon were dried, baled, and stored for winter.

**Fall.** Vegetable foods were gathered as they ripened in the late summer or early fall. Berries were picked and stored in underground caches in bark baskets. Indian or wild potatoes (*Hedysarum alpinum*) were preferred at this time although Tanaina people gathered them in the spring; in the summer they became dry and tough (P. Kari 1987:127). An easy way to collect this root plant was to raid mice nests in the fall when they were stocked for winter.

Hunting began in upland regions after fishing was completed. East of Nenana there
was a trail extending southward on dry ground from the Tanana River. The ancient trail led to the foothills near Rex (Kobi) and probably on toward the upper Nenana River area (George 1988:37; Brooks 1911:170).

Before the Western Ahtna expanded into the upper Susitna River, the Nenana-Toklat people (or perhaps other bands) conducted caribou drives during the fall migration at places such as Butte Lake. Poles for the drying racks had to be carried from below timberline to the lake. The racks from some of the last drives in the latter nineteenth century were still visible in the early 1900s and were clearly known by the Western Ahtna to have been built by the Nenana people (Kari and Fall 1987:194; Tansy 1984).

Sheep and moose were available in the hills throughout the Yanert Fork, Nenana River gorge, and Healy River valley. Little is known about the fall and winter movements of Nenana hunters in this area, except their numerous trails and old camps were noted by explorers around 1898-1900. The region was also used in winter when travel was easier over frozen streams (Brooks 1900:465, 1911:19; Eldridge 1900:27; Yanert 1900:678).

It is not known if the Nenana-Toklat people stopped using the upper Nenana River region after the "war" with the Ahtna and switched to exploiting the upper Toklat River, or whether they always utilized both areas. There may have been another group of people living primarily in the upper Nenana River region who joined with other Nenana groups when their population declined. The argument for an additional group comes from the realization that the Nenana people did not need to travel to the upper Nenana River and Susitna vicinity in order to secure caribou and sheep. These resources could be obtained on the north side of mountains closer to their summer fish camps. But there is little information to support this idea. By the twentieth century however, if not before, the foothills east of Rex (Kobi) and the Toklat River were the primary fall and winter use areas of the Nenana people. This use is reflected in the following summaries for fall and winter.

The Nenana people traveled south from the Tanana River in the fall to hunt moose and other small game near Rex (Shinkwin and Case 1984:35). They walked along dry river channels or along a route the railroad followed later. For about a month they hunted, stopping at favorite spots where there was dry wood, or to dry any meat that was caught (George 1988:19). They headed generally west after the Nenana River froze to allow passage, toward Toklat Springs near the Sushana River mouth, to secure the late fall salmon that were available until the middle of October. Once the fish were landed, they froze immediately in the cold weather. The open water of the springs in winter provided dead fish for bears, water for over-wintering ducks, and food for humans in lean times (Sheldon 1930:283). Plant foods and berries were most certainly gathered in the early fall, but little is known about the Nenana-Toklat people's vegetable food habits.
Winter. After fall fishing, hunters would leave the Toklat Springs area to go to the hills of the upper Toklat River to a place referred to as 12 Mile Camp (Schneider et al 1984:76). Caribou were hunted, along with any stray moose; the meat was returned to the main camp which may have been near the springs (George 1988:19). Sheep, wintering on the north side of the range, were taken farther up the river, or at "Dog Ass canyon" which is believed to be either on the East Fork or upper Teklanika River (Schneider 1984:76; Solomon Luke, 1989 personal communication).

In earlier times, a caribou fence was built near 12 Mile Camp. The native name of the location translates to "winter caribou fence" (Kari, 1989 personal communication). It probably served to capture caribou from the Denali herd, part of which has been known to winter in the area (Murie 1944:146).

It was the custom in the twentieth century for hunters to return to Nenana or other large villages around New Year's for a month of feasting and visiting. Whether hunters traveled the long distances in aboriginal times before the introduction of dog traction is not known. After feasting and visiting was completed, people would resume hunting when the daylight hours increased in late January. Little is known of aboriginal trapping habits; it is assumed they trapped throughout the late fall and winter in conjunction with large game hunting.

If trading trips were to be taken to Cook Inlet, they began in late winter while the snow was still good for traveling. Such trips took many months. Travelers did not return until summer or fall. The trips were not taken merely for trading purposes, but were made in conjunction with visits to distant relatives. The reinforcement of kinship ties through visiting was very important. However, it is not known if these trips became more frequent after dog teams made traveling easier (Brooks 1900:491; Jacob 1988:99; Ketzler 1988:47).

In about March the group began relaying meat and supplies back to the main village at Nenana where some of the elderly members had passed the winter. Once there, they prepared for their spring camp activities.

The Koyukon

Language and Territory

The Koyukon inhabited the northwest portion of DENA including lands well within the original Mount McKinley Park boundary. They were relative newcomers to the area
according to oral accounts. Sometime in the previous century they advanced southward from the Yukon River into the Kantishna drainage, driving apart the Lower Tanana and Upper Kuskokwim groups living there (Krauss and Golla 1987:74). Other Koyukon groups outside the Kantishna region occupied territory along the Koyukuk River, lower and middle Yukon River, and the Nowitna drainage. The Koyukon of the Kantishna have been classified as speakers of the widespread Upper Koyukon dialect, one of the three major subdivisions of Koyukon, that extended along the Yukon River from Stevens Village to Galena and south into DENA.

Upper Koyukon is largely understandable to the Lower Tanana speakers near Nenana, probably because of continued social contact. But there is a decisive linguistic border with the Kutchin above Steven's Village (Krauss and Golla 1981:74). Oral accounts reveal Koyukon is intelligible to the Upper Kuskokwim people who once lived at the Minchumina-Telida margin. Some Russian words appear in the Koyukon language just as they do in the neighboring languages.

Based on linguistic evidence, there were at least two groups of Koyukon in the Kantishna sector, Minchumina-Bearpaw, and Cosna-Manley; additional groups may be inferred from oral accounts and historical data—perhaps one at the mouth of Toklat or one large one encompassing the mouth of the Toklat River and Cosna-Manley (Krauss and Golla 1981:74; Shinkwin and Case 1984:22). The Minchumina or Minkhotana ("lake people") and another group at Birch Creek may have intermarried with Upper Kuskokwim from Telida to such an extent that by the 1890 affiliation was mixed. Both Koyukon and Upper Kuskokwim dialects were spoken by various people at Minchumina and Birch Creek (Joseph 1982-1984). The main Koyukon villages were concentrated at the mouth of the following streams, as well as all along the Kantishna River and at Lake Minchumina: Cosna and Bearpaw rivers, Birch Creek.

The Minchumina-Bearpaw people exploited nearly all areas of the northwest side of DENA. At the end of the last century, according to place name data and oral tradition, there were dozens of locations within the Preserve that were being used. They would, in the course of the year, traverse all ecological zones from the lowlands rich in waterfowl, furbearers, and fish, to the alpine tundra and rocky mountains for caribou, bear, and sheep.

These Upper Koyukon-speakers interacted with Lower Tanana groups at such places as the mouth of the Tolovana River, and on the middle Toklat River. The Minchumina group interacted socially and shared contiguous hunting grounds in the Alaska Range with Upper Kuskokwim people to west, as well as near Lake Minchumina. They also often traveled to the Koyukon village of Cos Jacket for potlatches and to the aboriginal trade fairs held at the mouth of the Tanana River. Well-defined travel routes connected them with neighboring groups and resource areas. Trails crisscrossed the land, joining areas such as the central Park district to the Tanana River via the Kuskokwim Mountains, and the Kantishna River mouth to Lake Minchumina.
The Cosna group inhabited a territory that included the area near the mouth of the Tanana River, the Cosna and Kantishna rivers, part of the Toklat River uplands, the Muddy River, and Kuskokwim Mountains. Both the Minchumina-Bearpaw and Cosna groups utilized similar resources and ecological zones, except perhaps the latter capitalized more upon the abundant salmon runs of the Tanana and Yukon rivers. The Cosna interacted with other Koyukon speakers on the Yukon River and at Lake Minchumina, with Lower Tanana-speakers near the Tolovana River, and Upper Kuskokwim-speakers at Telida. Potlatching and intermarriage occurred among all these groups, at least in recent years.

Native place names for the Minchumina-Bearpaw and Cosna territory are abundant; detailed accounts accompany most of the names as well. Land use information for this northwest segment of the Preserve for the latter 1800s is substantial in comparison to other Athabaskan groups.

Seasonal Round and Settlement Patterns

The Koyukon of the Kantishna Drainage can be characterized primarily as large game hunters. They sought caribou, sheep, and bear in an area that is now encompassed by DENA. Moose were rare or absent from the area for an undetermined period, but reappeared sometime during the last century and were soon eagerly pursued. The Koyukon also took advantage of the large runs of salmon, especially fall runs of chum and coho, and numerous kinds of freshwater fish that existed in the streams and lakes. Other small game, furbearers, waterfowl, and some vegetable foods rounded out the diet. But above all, the Koyukon were caribou hunters.

The journals of a few travelers who passed through the Kantishna area (1903 to 1908) provide some information on the Koyukon, but most of the available information comes from Abbie Joseph, an Athabaskan born in the region in about 1894, and from native elders in Nenana who once hunted in the area. Whitemen came to the Kantishna region relatively late (1905), in comparison to other Athabaskan areas. The Koyukon's participation in the fur trade economy had already altered their lifeways by the 1890s, however. Only a few remarks in the aforementioned journals allude to populations and villages in aboriginal times. Nothing is known about the Athabaskans who inhabited the region before the Koyukon moved there in the mid-1800s. The only hint of past occupation comes from the observation that Upper Kuskokwim and Lower Tanana speakers can easily understand each other.

**Spring.** Several subsistence activities occurred at about the same time in spring, but in widely separated areas; among these were caribou hunting and the activities at spring camp. Groups may have split up in order to profit from each resource, or caribou hunting may have begun earlier than is reported. The major event in the spring
was the caribou hunt. Hunters traveled up the Foraker and McKinley rivers to intercept the animals at their wintering grounds before the herd migrated deep into the Park for the summer. In the years when the caribou wintered on the flats south of Lake Minchumina, the hunt took place there.

Capturing caribou was only part of a long process of preserving and transporting the meat and skins to main camps. Underground caches placed at strategic spots stored excess meat for later retrieval. Elevated log caches replaced some of the underground caches in the late 1800s after metal axes were introduced. Caches of either kind were a vital component in the food quest, and their significance to archeology should not be dismissed lightly. Supplies might be needed at any time in order to serve hunters that were constantly on the move throughout their territory. Large quantities of meat gathered from the major spring and fall hunts had to be stored and relayed at intervals from kill sites to main camps. Elevated caches probably had an advantage over underground caches in that access was easier in the winter, but the latter may have preserved certain foods better. Abbie Joseph mentioned elevated caches frequently, especially around the McKinley River, with great concern throughout her many interviews. Although the exact locations of her place-names in the following comments on hunting are uncertain, the approximate drainages are known and noted:

[My mom would stay with her aunt in that house that you see in the photograph] while we were hunting up in the mountains. We went up to Mintadlee [hills along lower Birch Creek]—behind there to Toyan’ Kok’e [on McKinley River] where we stayed and hunted caribou. We caught [some] and dried the meat. There was a cache at NoIdlaghee Neelakhdenh [probably Birch Creek drainage] at the end of a hill. . . We put up the cache the spring before when we had gone up that way, up river (Joseph 1984:ANLC tape 11, p.6).

Members of the Cosna group traveled along the Cosna River toward the Bitzshtiny Mountains to hunt; some may have even wintered there (Charlie, E. 1988). The upper Toklat River was another productive hunting area that drew people from long distances. Wickersham met a returning Cosna group in May, 1903:

The genuine Indian name for the east fork of the Kantishna is Totlot [Toklat]. . . The Coskakat [Cosna] Indians still have their hunting grounds on this stream, and formerly used to live there for the greater part of the year. . . This band . . . left their winter-camp on the lower Tanana in the latter days of February for their annual early spring-hunt. . . Finally they reached the old site at the mouth of the Toclat [Toklat] where they had camped and prepared for the hunting season. . . Now, after a good spring-hunt, they were on their way back to the fish-camps at the junction of the Tanana and Yukon (Wickersham 1938:223,225,233).
Upon completion of the hunt, groups made their way to spring camps in late March or April where they settled down in one spot for about two months. One spring camp area that attracted people from as far away as Cosna, Tolovana, Minchumina and Bearpaw was along the Muddy River. Small camps of one or two families were scattered among the lakes, streams, and marshes of this low-lying area. Spring camp was a place where families and friends who may have been separated during the winter could be together again. It is fondly remembered by today's elders as a time when young people could be together and have fun. One lady who was a teenager in 1940 at spring camp along the Muddy River reported, "We were suppose to be ratting [muskrat hunting], but actually we were just having fun" (Edwin 1988:170).

One of the characteristics of spring camp was the variety of resources that were available. Beavers and muskrats were taken from lakes that also supplied plentiful freshwater fish. Aboriginally, muskrats were not the target resource at spring camp that they later became for the fur trade economy; but they were always available and easy to get at this time of year (Charlie 1988). By late April/early May, migratory waterfowl began reappearing around the spring camps and were a welcome addition to the diet (Florence Collins 1989 personal communication). Before breakup, black bears might be hunted as they emerged from hibernation and were still fat (Nelson 1983:175). If a group was lucky, their supply of caribou or moose meat from the spring hunt lasted well into spring.

The Muddy River was only one of many places where people could choose to go for spring camp. Other areas with similar resources were Lake Minchumina, along the Kantishna River, or for Cosna people, across the Tanana River to the north. Groups did not always return to the same area for spring camp each year. They chose different spots depending upon the wishes of group members, resource depletion, or for other reasons. For example, some Cos Jacket people who lost family members during the influenza epidemic in the spring of 1923 at Birch Creek, never returned to spring camp in the area again (Charlie 1988).

The ice usually left the Muddy and Kantishna rivers in late May or early June. When it did, families would often leave spring camp in boats made of caribou or moose skins, or in canoes. Breakup was not without its dangers; ice jams on the Kantishna River caused more than one family to lose their supply of food and almost their lives (Esau 1988:9).

Summer. Summer was another season when more than one subsistence activity occurred at the same time. Some families leisurely floated downstream from their spring camp to summer camp, stopping to freshwater fish along the way. The Cosna groups fished for salmon along the lower Tanana River or up the Yukon River; the lower Kantishna River groups fished along the Tanana. Even before fish wheels were introduced, salmon were taken in the silty Tanana River with nets in quiet side channels or eddies (Charlie 1988). Clearwater streams off the main river must have
been utilized for salmon also as was the case with neighboring Athabaskans, but specific information is lacking.

Chinook and chum salmon ascend the Kantishna River by the third week of July. They continue on to the lower reaches of the Toklat and Bearpaw rivers where they spawn (Louis Barton, 1989 personal communication). Spring camp groups electing to stay along the Kantishna for summer fishing would have a month and a half of meager resources between the end of spring camp and the arrival of the first salmon.

Minchumina and Birch Creek groups may not have participated in summer salmon fishing. Some of the people, perhaps just the elderly, spent the summer at places like Lake Minchumina where freshwater fish and waterfowl were available. Wickersham met a second group of people along the Kantishna River in 1903 who were from Minchumina/Telida. Their summer home was at Lake Minchumina, which they said, was in the middle of their hunting grounds (Wickersham 1938:256). A smokehouse, photographed in 1916 on the south shore of Minchumina attests to the rich fishery resource of the lake (Stephen Foster Collection, Archives, University of Alaska, Fairbanks).

The main summer activity for the people who were not fishing was large game hunting. In July, 1907, two travelers encountered a portion of a band of Indians at Minchumina. They indicated their other members were in the mountains hunting and would not return until winter (Gordon 1917:69,81). The summer hunting season was spent in upland regions, often well inside the old park boundary. Caribou, sheep, and sometimes bear were hunted (bears tend to be lean in summer). The meat was dried, and the skins were given primary treatment, all in an effort to lighten the returning load. Hunting camps were moved frequently, usually after each kill. The group would stop and camp until the meat was dried, then move on until another kill was made. When berries ripened, they were picked and cached also. After snowfall made travel easier, supplies were transported to main camps; however, some supplies were apparently relayed during the summer to caches at critical points along main trails.

**Fall.** After a season of salmon fishing along the Tanana or Yukon river, the Cosna people ascended the Cosna River toward the Bitzhtini Mountains to hunt caribou. For the Minchumina people, summer and fall hunting may have blended together with no break in the activities until late September or October when the late fall chum and coho runs peaked. Perhaps part of the Birch Creek or Bearpaw group remained to fish the summer salmon runs on the Kantishna River or at the mouth of the Bearpaw. Or perhaps they temporarily interrupted their summer hunting in the hills to return to the lower rivers to fish. It was more likely they only exploited the late runs on the Bearpaw River and Moose Creek, and perhaps Birch Creek upon their return from the hunt. It may have been easier to fish at the end of the hunting season rather than interrupt summer hunting, but the following account by Abbie Joseph alludes to fishing both the summer and fall runs, with the fall being the more important.
There was an area around there that the white people used to call Diamond... That was where we used to camp for fishing each year. There were a lot of fish around there—Khutenal'eeyh No' ['hidden creek']—at that time. So they would go there and make dry fish [in the summer]. Then they would also put away frozen fish after freeze up. Just during the freezing up month [October] the last of the salmon would come with their faces all worn away from traveling over rocks and so on. They also used to fish for those with hooks or spears. They used to pick out the good ones. They would split them and hang them up [fall dry fish method]. [The place] is called Ch'enok'et ['mineral lick']. So that was a really good area—provided us a good living (Joseph, ANLC: tape 4, p.3).

The fall caribou hunt was probably the most important of the annual hunts for the Koyukon just as it was for the Upper Kuskokwim and Ahtna groups; however, there is no information about communal drives, seasonal camps, fences or corrals except for the place name, "winter caribou fence", in the upper Toklat area. Brush or pole fences have not been reported in DENA, although they surely must have existed.

Sheep hunting was a prominent fall activity. Among other groups it was definitely a cooperative activity as it must have been for the Koyukon before firearms were introduced. Afterward however, it was possible to hunt sheep independently as the following account about Abbie Joseph's father demonstrates.

... there was a big bend ... on the Denali [McKinley River?] going down river. [My dad] built a house to hide in, in a rock--a lookout--on a level place at the end of the trail. It was nice in there. He put poles this way and that way, and then braced rocks around it. He also put rocks partially over and fixed it so he could sit in it. He would hide in there (Joseph, ANLC: tape 6,p.1). ... [H]e had a place to rest his gun. It was from there, when he saw a few animals, he would kill them. Dad would check his position very carefully [before shooting to determine] where the sheep would fall. He would shoot them and they would fall here and there. They would fall in a flat area below where they were shot and would not roll down the hill (Joseph, ANLC:tape 9, side B).

Winter. After hunting, people descended from the highlands in time to participate in the late fall salmon run which ended in late October. There is no information on whether the Koyukon used skin boats like the Upper Kuskokwim did to transport supplies. Possibly they did, but perhaps the rivers were not conducive to such travel. In later times, maybe only after dog traction was introduced, the cached meat and berries were relayed to main camps after snow cover made travel easier. When elevated caches were built, they became important staging points along main trails. Transporting of supplies was a major winter activity especially in a year when a family hosted a potlatch:
I had taken all this stuff out to the lake at Minchumina where I got all the things ready [for my father's potlatch in 1912]. Then we went back over to Noo Ghuyat'an'denh [on McKinley River] after freeze up. There was another cache back at the canyon. I started hauling stuff from there also. My dad said to me, "My child, did you get most of the stuff now?" I said, "Yes. There is a little more at Noo Ghuyat'an'denh at the cache. We'll just pick that up." I would haul it over the overland trail to Birch Creek. I also hauled things from [there to Minchumina]. I would come home to [my parents] afterwards. I made five trips (Joseph, ANLC: tape 11, p. 9).

Winter settlements may have been positioned close to one or two secure resources such as freshwater fish and caribou. Gordon concluded from his visit with the Koyukon at Lake Minchumina in 1907 that their winter village was southwest of the lake; Herron noted the location, on a small lake, on his map in 1899 (Gordon 1917:69; Herron 1901). The area is also close to caribou wintering grounds. In addition, Gordon determined there were many more villages around Minchumina and on streams south and north in the mountains, in earlier times. Whether these were summer or winter villages is not explained.

The Koyukon did not stay in one place all winter. The elderly were cared for in subterranean houses at permanent sites, but it was necessary for others to hunt. The Denali herd has been known to winter in the lowlands around Lake Minchumina, but the following story (which relates to a time before 1900) indicates some hunters travelled to the hills for caribou.

After [my] dad's parents lost the strength in their legs and became unable to travel around for hunting was when they [were] moved to Birch Creek [mouth]. There, across the river on the other side of the hill, was an underground house... They [were cared for] there. When someone would pass by to see them, they would get that person to stay with [the grandparents]... so my dad could then go up into the mountains [to hunt]... They would go up Toyar' Kok'e [on McKinley River]. We went all the way back to where there is a canyon (Joseph, ANLC: tape 2, p.25).

The Cosna group may have wintered in the hills while they continued their hunting quest like some of the Upper Kuskokwim groups did. Their permanent winter villages, though, would most likely have been located around lakes in the lower Cosna River region.

When the Koyukon first moved into the Kantishna they potlatched with Cos Jacket (Cosna) and Tanana people. After their relationships improved with the Upper Kuskokwim and Nenana folk, they expanded their focus to include these areas. Abbie Joseph and Charles Sheldon, a hunter-naturalist, briefly mention such winter trips.
I was in Nenana for a little while during the Christmas season. We used to stay there, with my parents and my uncle. It was at the time when I was still a child [1894 to 1898] (Joseph, ANLC: tape 3, p. 1).

January 27, 1908: ... we reached the open water of the Toklat at a place called the Cutoff--the beginning of an old Indian trail from the Toklat to the Nenana River. . . We pulled up on the bank among the tents of half a dozen families of Indians from Minchumin Lake, who were encamped there. . . These Indians had been to Nenana, where they had remained for some time with the Mission Indians. . . (Sheldon 1930:282,283).

Furbearer trapping took place in fall and early part of winter, or opportunistically. Little is known of the Koyukon’s winter trapping activities except a comment by Sheldon in January 1908 that is a continuation of his experience above at the Toklat River.

The Minchuminas had brought their year’s catch of furs and on the trail had met the Nenana Indians, who induced them to trade their furs for tin crosses and other worthless trinkets obtained in Nenana. . . [Returning to Minchumina, the men] had put out a few traps and that morning had caught a wolverine (Sheldon 1930:283,284).

Bears were fat and desirable by late fall before they entered hibernation. Men watched for black bears while hunting other large game. They were also taken throughout the winter at their dens. Old dens were often reoccupied and hunters searched these familiar areas while all the while looking for tell-tale signs of new dens (Nelson 1983:176-177).

The Upper Kuskokwim

Language and Territory

The Kolchan inhabited the upper Kuskokwim River region. Their distinct Athabaskan language, Upper Kuskokwim, is most similar to that of Lower Tanana, with which it is partially intelligible. But the language is quite distinct from that of Ingalik on the opposite border (Krauss and Golla 1981:75). It is understood by Koyukon-speakers near Minchumina and Cos Jacket because of social contact and intermarriage.
Early Russian explorers called the people of the upper Kuskokwim "Goltsan" or "Kolchane" which is probably a derivation of the coastal Tanaina Athabaskan word for all inland-dwelling Athabaskans—Gheltsana. The term, Kolchan (and for a time "McGrath Ingalik"), was used to designate the people of this area; however, ethnographers and linguists prefer to use the geographically descriptive term—Upper Kuskokwim Athabaskan. The people themselves used the term, Dena'ina, to describe themselves, which was the same as that used by the Tanaina (Fall 1987:79; Hosley 1981a:622; Stokes 1985:18).

In aboriginal times Upper Kuskokwim territory extended to Lake Minchumina and Birch Creek. Groups living here used Park lands in their seasonal cycle. Nothing is known about them however, except their general territory and the possibility they may have had winter villages in upland areas (Hosley 1966:95). By late nineteenth century the land was considered Koyukon territory. Koyukon and Upper Kuskokwim-speaking groups continued to jointly inhabit the area in the twentieth century.

There were six main groups of Upper Kuskokwim. Their territory stretched from near Lake Minchumina in the east, almost to the Stony River in the west, the Takotna River in the north and the Alaska Range in the south. Three of the six groups, Telida, East Fork, and Nikolai, used DENA to varying degrees (Hosley 1981a:619).

The eastern border of the Telida territory appears to have fluctuated between Lake Minchumina and Telida Lake. It generally encompassed part of the North Fork of the Kuskokwim River to the foothills of the Alaska Range at the head of the Swift Fork. Telida groups ranged seasonally as far as the Bearpaw River, but resided primarily west of Lake Minchumina, centered around Telida Lake (Hosley 1981a:619; Wickersham 1938:256). They associated, in later times, with both Lower Tanana and Koyukon people to the east and north, traveling to Cos Jacket on the Tanana River for potlatches and marriage partners. Koyukon relations however, may have been less amicable in earlier times.

The East Fork group lived between the Swift Fork of the Kuskokwim and Tonzona rivers and utilized areas stretching from the North Fork of the Kuskokwim River to the foothills of the Alaska Range. A major village was situated on the East Fork near the mouth of the Tonzona River. They interacted with the Telida people near the Swift Fork border on the east, and the Nikolai group near the Tonzona River on the west.

The Nikolai people lived within an apparently narrow range between the Tonzona and South Fork of the Kuskokwim rivers to the Alaska Range. They associated with the East Fork group upstream and other Upper Kuskokwim groups downstream. Relations were not particularly friendly with the Ingalik Athabaskans farther down the Kuskokwim River due to disputes over hunting territory. Neither were relations totally friendly with the Tanaina with whom the Upper Kuskokwim traded at certain places in the Alaska Range (Hosley 1981a:618; Kari and Fall 1987:130).
Seasonal Round and Settlement Patterns

Upper Kuskokwim people utilized portions of DENA, via well-known trails and waterways in the Alaska Range. Their seasonal cycle centered around large game hunting with fishing taking a subordinate role. Salmon were accessible to all the Upper Kuskokwim groups. The North Fork run was scanty however, and limited to one species; so Telida people desiring salmon utilized the richer spawning ground in neighboring territories (Stokes 1985:210,221). Small game hunting and fishing generally occurred close to permanent winter settlements.

The northernmost groups at Telida and East Fork are of primary concern here because they used Park lands directly. Knowledge about aboriginal Upper Kuskokwim people was elicited by Hosley in the early 1960s from elders who were at that time in their 80s. They attempted to recall the lifeways of their parents which would make the information pertinent for the 1850s. The first direct Russian contact with Upper Kuskokwim group occurred in 1844. Previously they acquired Russian goods through trade with the Tanaina (Hosley 1966:76). Therefore our knowledge of aboriginal Upper Kuskokwim life, like the other Athabaskan groups circling DENA, is colored by the fur trade economy and the introduction of Christianity.

**Spring.** The Upper Kuskokwim people began preparing for their major spring caribou hunt in late winter or early spring. The hunt was a cooperative affair requiring two or more groups to join together for the effort. Toboggans, drawn by men, carried all necessary possessions plus birchbark canoes for the return trip. Caribou skin packs on dogs carried additional supplies. The hunters left before the river ice broke up. Favorite spring hunting grounds included any number of places around Lake Minchumina, or the Foraker and McKinley rivers. The East Fork group, who often hunted northwest of Mt. Dall, occasionally joined with those from Telida and Minchumina (Hosley 1966:96-97).

Caribou were taken with the aid of a circular surround or corral. Pole snares were placed in the corral or on converging fences that led the animals to them. Men and dogs herded the caribou to the corral where they were dispatched with arrows, clubs, or spears. Snares were made of braided caribou rope; spears and arrows were tipped with caribou antler or caribou leg bone (Hosley 1966:98).

Various species of whitefish were an important spring resource taken by group members who stayed at the winter villages or by the returning hunters. The establishment of Telida was in fact based upon good access to whitefish. The spring whitefish season began in April; fish were usually taken at the outlets of lakes as they moved from the rivers into the lakes for spawning. Two particularly good whitefish areas were at the confluence of the Swift Fork and North Fork, and the mouth of Highpower Creek.
Blackfish were also taken in certain creeks and lakes, especially during times of food shortage, but were considered a poor and nutritionally inferior substitute (Stokes 1985:269;273-274;286).

Migratory waterfowl began returning in late April and were a welcome addition to the diet. They were captured while on the ground, or in the air with bow and arrow. Sometimes nets were thrown over the birds or, during the molt, they were driven into nets. Hunting blinds of brush or upended tree stumps were constructed at productive sites that were used repeatedly (Stokes 1985:162).

Other parts of the waterfowl were utilized besides the meat. Certain feathers had ceremonial value; some skins were made into clothing; the eggs were eaten. Any surplus birds were cleaned and dried for storage. Geese and ducks were the most desired waterfowl; fish-eating ducks were avoided if possible because of the disagreeable taste (Stokes 1985:162).

Data are not available on taking muskrats and beavers at spring camps. However, it is assumed the Upper Kuskokwim followed this characteristic pattern.

**Summer.** Sometimes the entire summer was spent caribou hunting in the foothills and upper river regions. Summer caribou hunting may have been oriented more toward the family or individual hunter rather than the large cooperative group hunts of spring. Hunters routinely climbed specific hills from which they could examine the landscape for game. The upper river areas were desirable for another resource—salmon—which spawned in some of the clearwater streams in late summer (Stokes 1985:68,130).

Fishing was of secondary importance to the Upper Kuskokwim. But whitefish were considered important enough that families would descend immediately after the spring caribou hunt in order to place their weirs across lake outlets by June. Basket traps and some dip nets and spears were used in conjunction with the weirs. Trout were taken during the summer too, with bone hooks on twisted sinew or willow bark hand lines. Gill nets were made of willow bark or sinew string (Hosley 1966:100-101). Telida people took sheefish from Highpower Creek—an especially productive place. One favorite recipe used them with fish eggs, cranberries, and fat (Stokes 1985:286).

Three varieties of salmon were available to the Telida and East Fork groups on tributaries of the Big Tonzona River, East, North, Swift and Slow forks of the Kuskokwim River, and Highpower Creek. However, the chinook and chum were present in such small numbers near Telida that only the coho run in late August at Highpower Creek and on the Swift Fork was of resource value. Coho fishing continued until late September. Apparently with little effort an abundance of fish could be taken here and at other spawning areas. The fish were dried and stored in pits. A salmon run might last up to 21 days, but fishing ceased when all drying spaces were filled.
Plant products were collected in late summer and fall, particularly berries and greens. They were stored beneath moss in shallow pits for winter retrieval. Certain plants and white spruce pitch were gathered for medicinal purposes. Grasses were gathered after they had dried in the fall for use as liners in footwear. Moss served as diaper liners. The fungus from birch trees was burned as a mosquito repellent (Stokes 1985:291-302).

Nearly all the parts of trees were used in a variety of ways, in addition to firewood. Birchbark lined cache pits as well as covered canoes and roofs. Spruce boughs were spread on the floor of summer dwellings. Spruce bark made a slip-free fish cutting surface. Spruce pitch sealed canoe seams. Spruce roots bound baskets and canoes (Stokes 1985:291-2,299).

The Upper Kuskokwim valued different species of wood for the qualities each possessed. Birch was the first choice for firewood and in the manufacture of implements. They favored cottonwood for summer fires because it produced fewer sparks to damage summer dwellings. Fish were preserved with smoke from cottonwood and alder. Willow made good tent pegs and twine for little fish nets and traps (Stokes 1985:300-302).

Fall. Fall was devoted to large game hunting. The fall caribou hunt was the most important of the two cooperative hunts, providing the bulk of a group’s winter food supply. Herds were found on the western slopes of the Alaska Range from the headwaters of the Stoney River to the Toklat (Hosley 1966:45,104).

Caribou were captured in a number of ways. Hunters sometimes disguised themselves in a caribou skin in order to get close enough to shoot a lone animal with a bow. During the rut, rubbing scapulae together attracted the animals, as sometimes did waving a piece of skin. In winter a hunter in good physical condition on snowshoes could occasionally overtake an animal if snow conditions slowed the animal’s flight. But the most productive hunting method utilized a corral or fence; there is some question, however, as to whether every Upper Kuskokwim group used corrals (Hosley 1966:98; Stokes 1985:130-131).

Suitable sites for caribou fences were limited. They were also labor intensive to build and maintain. Fences were optimally situated between natural barriers like hills or waterbodies which acted to funnel the animals. They extended for a mile or two and may have been simply brush and small poles placed between occasional posts. Rawhide snares suspended at neck level were positioned at periodic openings. Hunters came from their nearby camps every day or two to remove the animals and repair the fence. Fences could be used all year round, but most activity took place in the fall and early winter (Stokes 1985:129-130).
The surround or corral was also used. It was constructed of poles with an opening on one side. Men and dogs gradually drove the caribou along a converging fence toward the opening where they were eventually taken with arrows, clubs, spears, or snares (Hosley 1966:98).

Another important fall resource was sheep, which were taken after considerable travel to the South or East forks. Not only was the meat desirable, but the skins were used for bedding and foot liners. Hunters sometimes camouflaged themselves with white skins if they were hunting near snow in order to get close to the sheep. During the rut, fluttering sheep skins was one method used to attract their attention and lure them. Occasionally sheep could be run down in brushy canyons, but most often they were ambushed as they appeared along a trail or were driven toward waiting hunters (Stokes 1985:156).

Fall and winter were the preferred times to take black and grizzly bears because of their stored fat. They could be found in the fall at salmon spawning sites and were enticed to charge spears that had been planted in the paths leading to the fishing holes (Stokes 1985:150).

Moose began to reappear in the area in the mid to late nineteenth century. Their large size and wide ranging habitat made them a very desirable resource; but the Upper Kuskokwim people still continued to travel to the mountains for their fall caribou hunts until after 1900. They hunted moose throughout the year, but they especiallycoveted moose in the fall because of the high fat content and the bulls’ thicker hides. In summer, thinner cow moose hides were taken for use in making babiche (Stokes 1985:71, 86-87).

Moose fences were apparently not used by the Upper Kuskokwim people as they were in other areas. But many moose were usually taken in conjunction with the fall caribou hunt. The meat was dried along with the other game and floated downstream in skin boats to winter settlements. Some meat may have been cached in the hills for later use there, or retrieved with toboggan after snowfall (Hosley 1966:99; Stokes 1985:85).

Ptarmigan and grouse were taken throughout the year, but particularly large numbers were collected in the fall during the caribou hunt and in early winter. In late October or early November, before freeze up, the fall hunt ended. The skin boat that transported the winter food supply was made of two or more skins of moose or caribou stretched over a willow pole frame. The whole root system of a small spruce could be exhausted in making the framework. The hides were reused at the completion of the trip (Hosley 1966:99-100; Stokes 1985:170).

Whitefish and salmon from the late fall runs were taken by the returning hunters or by others not engaged in the hunt (Hosley 1981a:619). Once back at the winter camp, the main activities turned toward processing hides and making winter clothing (Hosley...
Winter settlements were frequently situated on lakes or clearwater tributaries of major streams that provided abundant freshwater fish and access to hunting grounds. From these sites members could retrieve food stored in underground caches, pursue small game, fish, and periodically seek large game farther away. Villages are known to have been located at Lake Minchumina, Telida, the mouth of Shisnona Creek, the upper reaches of Birch Creek, and the upper reaches of the following rivers: East Fork of the Kuskokwim, Foraker, and McKinley (tributary of Kantishna River) (Hosley 1966:95,135,154; Stokes 1985:68-69). Some of these sites became Koyukon settlements in the latter nineteenth century when the Koyukon moved into the Minchumina/Birch Creek area.

The winter settlement may have been more of a base to which members periodically returned during their repeated hunting quests, than a true village. Sometimes the whole winter was passed in the foothills living off occasional caribou and dried foods from the fall. Whether a true village existed or not, it may be said of all the inland Athabaskan groups that the territory they exploited was their home (Hosley 1966:108,135).

Small game, especially beaver, were important winter food resources that supplemented underground caches of berries, dried meat and fish. Hares and ptarmigan were snared, clubbed, or taken with bow and arrow. Hare skins made bedding and lined clothes, but the cyclic nature of the species resulted in an unpredictable resource (Hosley 1966:47,91-92; Stokes 1985:159). If other resources were in a low cycle and the caribou herds happened to change migration patterns, catastrophic famine could result. Oral accounts cite episodes where people were forced to eat dogs or resort to cannibalism in order to survive (Hosley 1966:93; Stokes 1985:129).

Mid to late winter was considered the lean season. The reserves of dried food were nearly consumed. Beavers were second only to caribou in importance as a year-round resource. They especially contributed to the diet in the winter. They were taken in a variety of ways, which usually involved either opening the top of the lodge after blocking the exits or breaking the dam. Sometimes in summer they were taken as they tried to repair their dam (Stokes 1985:157-158). Their value as food was greater than their fur value before the Russian fur trade era.

Porcupines were a welcome variety in the winter diet and were considered emergency food because they were easy to catch. They were usually just clubbed to death and the quills burned off. The preferred time to take porcupine was in the fall when they were fattest and the taste mildest. Some were even frozen for potlatches and special events later (Hosley 1966:93; Stokes 1985:161).

Black bears were another winter resource for lean times. But they were taken and
consumed only by men because of cultural restrictions. Elderly women might partake of specific parts, but generally avoided bear altogether (Nelson 1983:182-183). Bears were coaxed from their dens and impaled on spears as they charged. More often the exit was blocked, and the bear was speared from an opening made in the side of the den. If the meat was not needed immediately it might be saved for potlatches or was cooked for dog food. Bear fat was relished as a food and for medicinal purposes (Stokes 1985:149,151).

Fish contributed to the winter diet also. Holes were cut in the ice with poles tipped with antler. Then conical fish traps made of split spruce were set, or barbless bone hooks on braided sinew lines were used (Hosley 1966:93).

Furbearers were hunted from late fall through mid-winter. The skins of certain animals were valued for clothing, while others like muskrat, lynx, and beaver were taken for food as well. Generally, skins were taken to fulfill clothing needs. Later, they were taken in quantity when they became an important trade commodity. Late winter to early summer was the main period when muskrat and beaver were taken. Land-dwelling furbearers were captured in deadfalls, snared with caribou-hide nooses, or taken with spears or arrows (Stokes 1985:172,175).

Potlatches were held in winter. The Upper Kuskokwim traveled to neighboring villages to celebrate commemorative feasts or held their own in return for an earlier potlatch (Hosley 1966:107). At the turn of the century dog traction made long distance winter travel easier. Some groups went as far as Cos Jacket or Nenana. But it is not known how far aboriginal people ventured.
APPENDIX D

Photographs of the Teklanika Artifact Assemblage,
Reproduced from West 1965
Plate 8. Points from Teklanika West. Background in all plates is in millimeters and centimeters (West 1965:Plate IV, p.19).
Plate 10. Knife Fragments and Blanks from Teklanika West (West 1965:Plate VI, p.22).

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Plate 13. Large Side Scrapers from Teklanika West (West 1965:Plate IX, p.28).
Plate 15. Microcores and Core By-Products from Teklanika West: Profile View (West 1965:Plate XIa, p.33).
Plate 16. Microcores and Core By-Products from Teklanika West: Facial View (West 1965:Plate X1b, p.34).
Plate 17. Microcores and Core By-Products from Teklanika West: Dorsal View (West 1965:Plate XIc, p.35).
Plate 18. Prismatic Blades from Teklanika West (West 1965:Plate XII, p.38).

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Plate 21. Large Bifacial Knives from Teklanika East (West 1965:Plate XV, p.45).
Plate 27. Prismatic Blades from Teklanika East (West 1965:Plate XXI, p.60).
As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environment and cultural value of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interests of all our people. The Department also has a major responsibility for American Indian reservation communities and for people who live in island territories under U.S. administration.