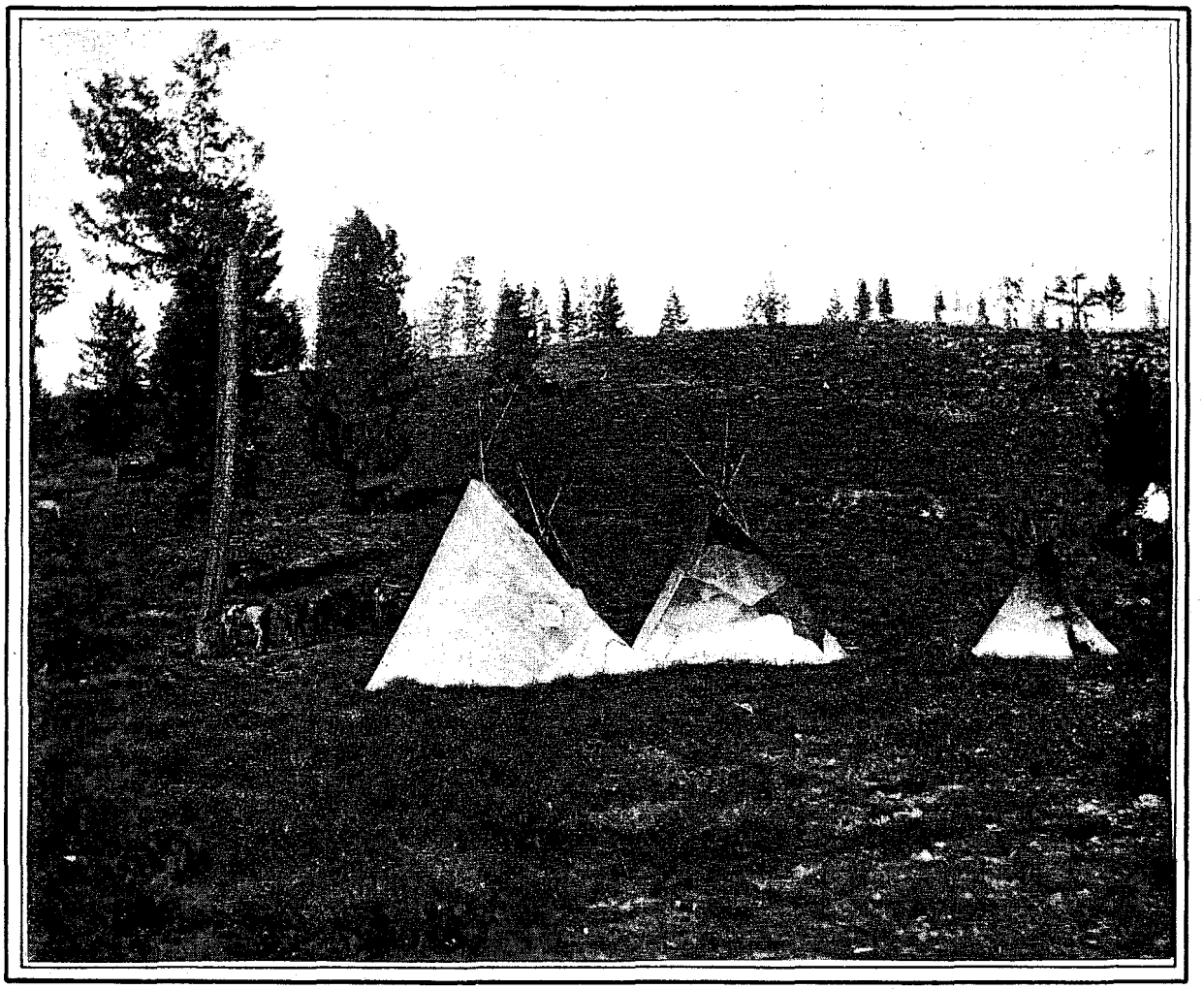
The Prehistory of the Lolo and Bitterroot National Forests : an Overview



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USDA Forest Service, Northern Region
Lolo and Bitterroot National Forests
1986

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THE PREHISTORY OF THE LOLO AND BITTERROOT NATIONAL FORESTS

(AN OVERVIEW)

OR

"MAKING IT IN A MARGINAL ENVIRONMENT THE PAST 10,000 YEARS!"

JANUARY 1986

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Anyone who has undertaken the task of researching and writing an "overview" is aware of the magnitude of the job. The authors have spent well over a year researching, writing, editing, and of course reediting drafts of this document. The project, however, could never have been completed without the support of many people both within and outside the Forest Service who either worked on or, from a management or supervisory capacity, strongly supported the project.

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Finally, the ultimate responsibility for any errors, misrepresentations, or inaccuracies within this overview lies directly with the authors, C. Milo McLeod, Zone Archeologist, and Douglas Melton, Archeological Technician.

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ABOUT THE AUTHORS

C. Milo McLeod was born in Seattle, Washington, in 1947. He attended high school in Victoria, British Columbia, and Kirkland, Washington. McLeod served as a parachute infantryman in the United States Army between 1968 and 1970 in Germany and Vietnam. He received his bachelor's degree from the University of New Mexico in 1972 and his master's degree in anthropology from the University of Montana in 1984. McLeod has participated in field projects in the American southwest, the Arctic, the Northern Plains, and the Northern Rocky Mountains. He has been working for the Lolo National Forest's Cultural Resource Management Program since 1975.

Douglas Melton was born in Ann Arbor, Michigan, in 1959. He graduated from high school in Missoula, Montana. As a young man, he participated in several paleontological excavations in central Montana with his father, professor William Melton. Melton received his bachelor's degree in 1981 and is currently a graduate student in anthropology at the University of Montana as well as the office manager for the State Archeological Records. Melton has participated in archeological surveys and excavations throughout the Northern Plains and Northern Rocky Mountain areas as well as assisting in writing several other archeological and paleontological overviews in Montana. For this reason, Douglas is known throughout the Region as "Mr. Overview."

I. INTRODUCTION

The Lolo and Bitterroot National Forests contain a rich and diversified prehistory represented in the sites and artifacts located throughout National Forest System lands. These sites and artifacts contain the only available information about the lifeways of the prehistoric inhabitants.

Since 1975, the Lolo and Bitterroot National Forests have maintained a Cultural Resource Management Program to identify and evaluate the significance of their cultural resources. Prior to this, very little archeological research had been undertaken in western Montana or east-central Idaho; even less had been conducted on National Forest System lands. For these reasons, the existing data base in 1975 was sketchy indeed. Ideally, an extensive overview should have been completed during the formative years of a Cultural Resource Management Program. This was not done by most Forests in Region One. And, in retrospect, this was probably a wise decision simply because so little archeological data was available. Now (1985), after nearly 10 years of archeological surveys, site testing, and a few excavations completed in western Montana, enough information exists to draw some hypotheses about the prehistoric lifeways and chronological development of the area. This overview, in part, will attempt this task.

A cultural resource overview is a document required by the National Forest Management Act and Forest Service regulation (FSM 2360). Both the Lolo and Bitterroot National Forests have completed interim overviews to meet the immediate needs for Forest planning (McLeod 1979, Caywood and Light 1984). However, neither of these documents was intended to constitute a complete overview for cultural resource management and Forest planning purposes. Dr. Ernestine Green, Regional Archeologist, recognized these shortcomings and requested funding in 1984 to complete a formal prehistoric overview for the Lolo and Bitterroot National Forests.

The majority of the archeological data generated from this area was gathered during cultural resource management compliance surveys, and the current Zone Archeologist, C. Milo McLeod, participated as a member of the Lolo National Forest's Cultural Resource Management Program since its inception. For these reasons, a decision was made to research and compile this document using in-service capabilities rather than contracting the task to a specialized research firm. Hopefully, this approach will pay dividends in that a more comprehensive and usable (for land management purposes) document will be the result.

Douglas Melton, a graduate student at the University of Montana, was hired to assist McLeod with the project. Melton had previously worked as office manager of the State Archeological Survey Records as well as on several archeological field projects in Montana and elsewhere on the Plains. He was an extremely valuable asset because of his indepth knowledge of the State archeological records and the artifact collections.

A. Goals

The goals of this document are many and diversified and it may be impossible to achieve each one equally. The primary goal is to compile and synthesize the

currently known data as it relates to the prehistory of western Montana and east-central Idaho, specifically, the lands administered by the Lolo and Bitterroot National Forests. Much of this effort is for the professional archeologists currently working within or adjacent to the study area. It is also for future Forest archeologists who will undoubtedly follow. We will attempt to point out what information is available, what condition it is in, and probably most important--where it is located. Sometimes constructive criticisms will be addressed to those works that appear to contain glaring inaccuracies.

The second goal is to pull together the environmental data both past and present that influenced human behavior throughout prehistory. This is an essential step for interpreting the archeological record within the study area as well as for formulating hypotheses for future research questions.

Thirdly, not only do we wish to point out what is already known about the local prehistory, but also to identify those areas where gaps in knowledge occur. From this information, solid research questions can be addressed both by Forest Service archeologists and by the research community as a whole. Future research programs and cultural resource management projects will at least have a foundation from which to begin building their interpretations of prehistoric lifeways and social systems. This will grow in importance as increased interest is generated about the area's prehistory. This interest is reflected by the recent Society of American Archeologist conference on the Northern Rocky Mountains.

Finally, perhaps the most important goal is that the document can be read and understood not only by the professional archeologist and the general public, but especially the land manager. Of course, it is important to disseminate information to our peers within the scientific community, but just as importantly the information must be understandable to the land manager. A Forest Supervisor or District Ranger has difficult decisions to make concerning a complex variety of resource issues of which archeological sites are only a part. It is imperative that they can quickly gain a working knowledge of the types, distribution, and significance of the prehistoric resources they manage. Likewise, it is hoped the amateur archeologist or other interested members of the general public will be able to glean an understanding and respect for the prehistory contained within the archeological record on the lands of the Lolo and Bitterroot National Forests.

B. Methods

The completion of this prehistoric overview required the pulling together of a tremendous amount of raw data. Much of it had been generated by the USDA Forest Service and was readily accessible. Other forms of data are held in obscure reports on file at the University of Montana or the University of Idaho. Information had to be gathered from two separate states, including their respective universities, and State Historic Preservation Offices, as well as two separate Forest Service Regions.

Once the information was gathered, it had to be interpreted and synthesized into the overall framework of the area's cultural history. The authors were surprised by how much written information existed applicable to the study area and that a large percentage of this information had been generated within only the past 5 years! Very little fieldwork was anticipated for this project, and

in fact only 1 week was spent testing and monitoring some previously recorded sites within the Salmon and Selway River drainages. This was done primarily because neither author had visited prehistoric sites in these areas and felt a cursory knowledge of the sites was necessary before they wrote about them.

Finally, another major function this overview will fulfill is to compile a comprehensive bibliography related specifically to the prehistory of the area.

C. Limitations

It is ironic that an undertaking of this magnitude becomes outdated almost at the moment it is published. Nevertheless, the rapid changes that occur in the disciplines of archeology and cultural resource management coupled with increased efficiency of information transfer make this a reality. New information is steadily presented to the profession that will change or modify some of the ideas and concepts presented in this document in the future.

Also, this overview should in no way be used or considered as a substitute for field work. As Chapter IX (Survey Strategies) illustrates, only a small percentage of the Forests have received cultural resource surveys. New information continues to emerge and the cultural resource management program must be flexible to meet these demands. Likewise, the document is not "the last word" regarding site "significance." A site viewed as significant today may not be tomorrow when additional inventories are completed and similar type sites found. The reverse of this can also be true. The overview should be used as a starting point from which to make sound site evaluations.

Furthermore, this is not an academic type of document. Academicians will hopefully find its contents useful as a reference and research source, but its primary function is that of a management tool for agency personnel.

Finally, the publication should not be viewed as a static document. Rather, it is conceived as a dynamic work that can be updated and modified on a scheduled basis to meet the current standards of knowledge. Chapter X discusses this concept in greater detail and sets some long-range guidelines for completion of this task.

II. ENVIRONMENTAL SETTING PART I: THE PRESENT

The study area discussed within this overview comprises the lands of western Montana and east-central Idaho contained within the administrative boundaries of the Lolo and Bitterroot National Forests. Since the boundaries of both Forests are manmade and a relatively recent phenomenon, these boundaries have little relationship to contemporary or paleo-environmental systems in the area. This chapter will focus on both the present and past environmental settings for those regions.

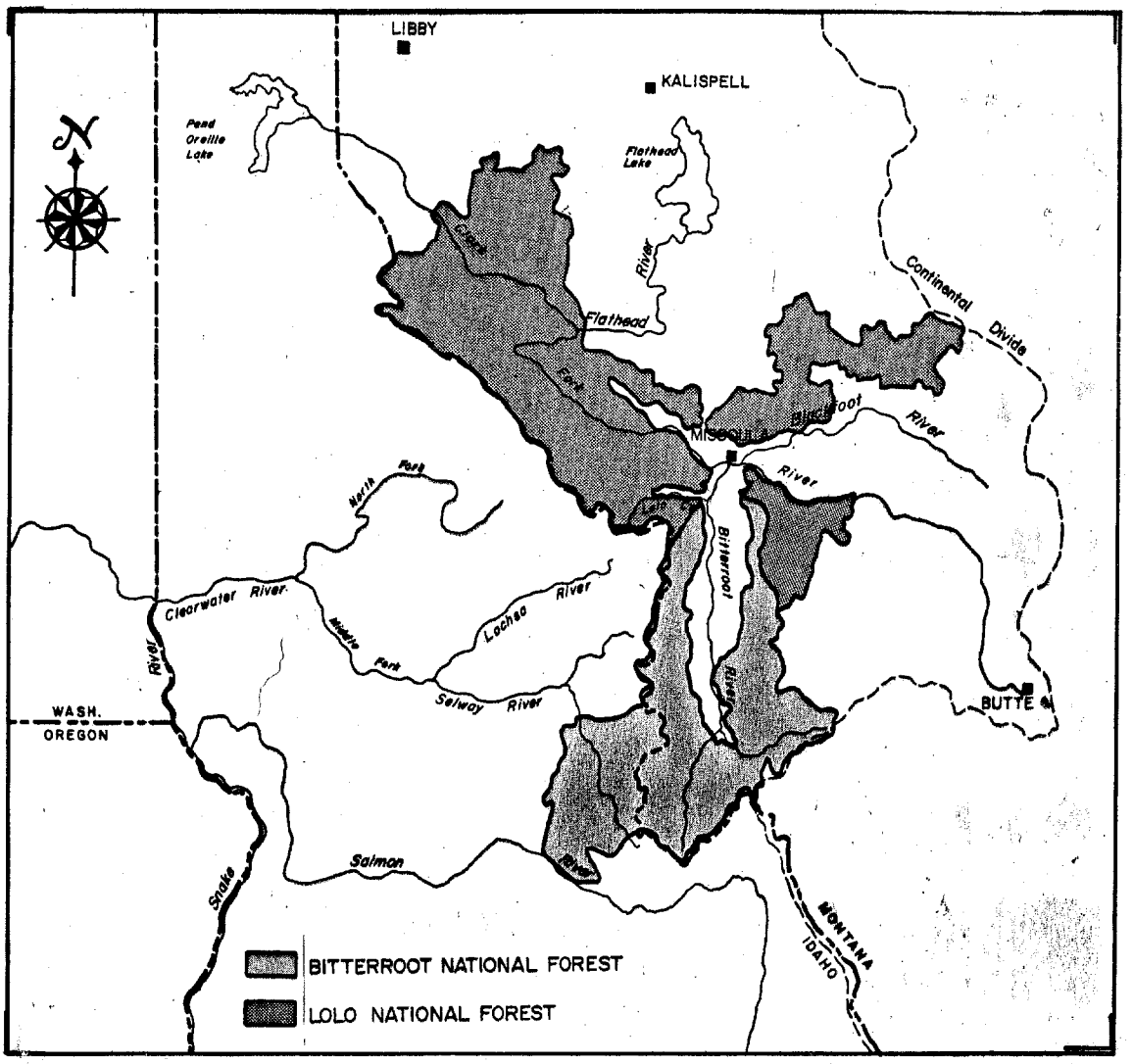


Figure 1 Map showing location of the Lolo and Bitterroot Nat. Forests, western Montana and east/central Idaho.

The Lolo National Forest is situated in west-central Montana between the west slope of the Continental Divide and the crest of the Bitterroot Range (see Figure 1). The Clark Fork River is the major drainage which essentially bisects the Forest on an east-west axis. The Clark Fork River begins near the Continental Divide and flows nearly 300 miles west into Lake Pend d'Oreille in northern Idaho. Other major tributaries that flow into the Clark Fork River within the Lolo National Forest boundaries include Rock Creek, Fish Creek, the Blackfoot River, Bitterroot River, St. Regis River, Flathead River, and the Thompson River.

The Bitterroot National Forest lies west of the Continental Divide in the extreme southwestern corner of the state with a portion extending into east-central Idaho (see Figure 1). These areas include the Selway-Bitterroot Wilderness Area and the newly created River of No Return Wilderness Area. In Montana, the Bitterroot National Forest is drained by the Bitterroot River which is formed by the confluence of the East and West Forks of the Bitterroot River near Conner, Montana. From this point, the river flows almost due north approximately 75 miles and enters the Clark Fork River near Missoula, Montana.

In Idaho, the Bitterroot National Forest is drained by the Selway and Salmon Rivers. The Selway River begins near the crest of the west slope of the Bitterroot Range and flows west where it joins the Lochsa River. At this point, the two streams become the Middle Fork of the Clearwater River, a secondary tributary of the Snake River of the Columbia River System.

The Salmon River begins near Lost Trail Pass on the west slope of the Bitterroot Mountains and flows in a westerly direction until it too joins the Snake River in west-central Idaho. The Salmon River forms the southwestern boundary for the Bitterroot National Forest.

The minimum elevations for the proposed study areas in the Bitterroot and Clark Fork Valleys range from approximately 4,400 feet above sea level near Darby, Montana, to 2,800 feet above sea level near Thompson Falls, Montana. In Idaho along the Selway and Salmon Rivers' canyons, the elevation drops to 2,800 feet above sea level.

The maximum elevations range from 10,015 feet on Trapper Peak in the Bitterroot Mountains to over 8,500 feet above sea level on the Scapegoat Plateau. However, the normal range of elevations for the majority of peaks and ridges within the study area is between 6,000 and 7,000 feet. Six separate mountain ranges traverse the study area. These ranges are all part of the Rocky Mountains and include the Cabinet Range, Bitterroot Range, Sapphire Range, as well as portions of the Mission Range and the John Long Mountains on the Lolo National Forest. The Bitterroot National Forest includes portions of the following mountain ranges: the Anaconda Range, Beaverhead Range, and the Bitterroot Mountains.

A. Geology/Physiography

The geologic history of the east side of the Bitterroot Mountains is complex. The Idaho batholith, principal geologic formation of the Creataceus Period in this region, created the Bitterroot Range. Vast quantities of granitic quartz monzonite materials were thrust up into overlying, warped metamorphosed Precambrian sediments. Along the contact zone between the quartz monzonite of the Idaho batholith and the precambrian rock, intensive metamorphic action has

occurred. Minor intrusions, usually in the form of dikes, occurred during the Tertiary Period (USDA, Forest Service 1976:9).

In the area of southwestern Montana, there are also large areas of Belt rocks with much gneiss and schist of archean type overlapped by folded and faulted Paleozoic and Mesozoic rocks. Intruded into them are granitic rocks of the Idaho and Boulder batholith and outlying intrusions (Alden, 1953:1).

B. Climate

The climate of the Lolo and Bitterroot National Forests in Montana can be described as having warm, short summers with temperatures approaching 100° F. and winters that are relatively mild but long when compared to those east of the Continental Divide. In Idaho, within the Bitterroot National Forest, the summers are generally similar to those in Montana, except along the main Salmon River Canyon. Here, temperatures are warmer and often reach well over 100° F. during the summer months. Winters are comparatively mild along the river corridor with snow melt occurring in March in most years. However, January temperatures of minus 20° F. are not uncommon in the nearby mountains or in the Clark Fork and Bitterroot Valleys of western Montana.

The climate of western Montana is dominated by warm moist maritime air masses coming from the Pacific Coast. However, substantial differences in temperature and precipitation can occur within relatively restricted geographical areas, primarily due to changes in altitude (Fredlund, 1979:10). The Bitterroot National Forest and the Rock Creek drainage area of the Lolo National Forest have a more continental climate with colder and drier conditions.

Across the Bitterroot Mountains within the Salmon and Selway River drainages, similar Pacific Coast weather patterns exist. The exception to this pattern is the crest of the Bitterroot Divide which often halts moist or warm air masses. Most of the total annual precipitation comes from frequent cyclonic storms traveling in an easterly course. Average precipitations in this area range from about 25 inches annually to well over 60 inches at the higher elevations (Benson, Knudson, Dechert, and Waldbauer, 1979:66). Aspect, or a mountain slope's exposure to the sun, and elevation play significant roles in affecting and modifying the Pacific weather fronts and may actually produce microclimates within the mountains.

C. Vegetation

The growth rate and type of vegetation in an area affect land-use practices today and probably did in the past. The vegetation of western Montana falls within the Northern Rocky Mountain vegetative type. Generally, the floral and climax species found throughout this zone result from changes in elevation, aspect, and rainfall.

Since the area represents a transition zone between the relatively mild Pacific-influenced climate and the colder and drier continental climate, a gradiation in vegetation occurs. The northwestern portion is occupied by mixed stands of western red cedar, grand fir, western hemlock, western larch, Douglas-fir, and western white pine. Above 5500 feet, Engelmann spruce and subalpine fir along with lodgepole pine are major components. Over the remainder of the area, western red cedar and grand fir are confined to moist

canyon-bottom sites or seepage areas with Douglas-fir, ponderosa pine, and lodgepole pine primary species up to 6000 feet; lodgepole pine/ subalpine fir dominating stands at the higher elevations. Approximately, 20 percent of the area is in grassland confined generally to areas below 3500 feet (Arno, 1979:39). Vegetative cover is generally thickest on the cool north- and west-facing aspects where dense stands of timber, thick brush, and large amounts of deadfall commonly occur.

The forests along the western slope of the Bitterroots reflect a wetter climate. Daubenmire (1943:328) describes these forests as a "hemlock aborvitae." This zone exhibits vegetative characteristics similar to those found in the Cascade Mountains and consists of western larch, white pine, Douglas-fir, and grand fir. The presence of these species indicates the distinct climatic differences between the more moist west side of the Bitterroots and the drier east slope (Fredlund, 1979:7).

D. Fire Ecology

The majority of lands within the study area are covered with coniferous forests comprised of a variety of species. Recent studies on the Lolo and Bitterroot National Forests indicate that fire has been a continuous natural part of the environment. The frequency with which natural fires occur appears to be dependent upon habitat types. For instance, the ponderosa pine bunch grass habitats have natural fire frequency of about every 10 years. Fires occur between every 40 and 60 years in the Douglas-fir pine bark habitat types and approximately every 150 years in the dense stands of lodgepole pine. Even the cedar tree stands that occur in the cool moist drainages have a natural fire occurrence of approximately every 300 years (Davis, 1980).

It had been assumed that most ignitions were begun by natural fire starts such as lightning from intense summer thunderstorms. However, recent evidence may indicate that prehistoric man may have had a greater influence on fire occurrences than previously thought. The ethnohistoric and the ethnographic record describe forest fires actually being started by many Native American groups for a variety of reasons. Fire was used for habitat manipulation by the Indians of the Columbia Plateau region in North Central Washington and the Willamette Valley in western Oregon (Ross 1981 and Habeck 1961). Other examples of aboriginal burning are documented from the Blue Mountains of northeastern Oregon and east central California (Shinn 1980 and Reynolds 1959; Lewis 1973; and Kilgore and Taylor 1979).

Prescribed fire was used by native groups in western Montana for a variety of purposes such as improvement of horse grazing and hunting areas. While campsite and trail clearing, as well as enhancement of valuable plant species were also given as reasons for aboriginal burning (Barrett 1981), sometimes fires may have been set simply for the excitement of watching them burn. Lewis and Clark described this activity during their westward trek over the Lolo Trail in 1805 (Devoto 1953).

The effects of wildfire (natural or man caused) on archeological sites is a subject still in its infancy. Nevertheless, some data is available primarily from the southwestern United States such as Mesa Verde and Bandelier National Monuments and California and eastern Oregon. Generally, researchers have found

that prescribed fire burns with lower temperatures than uncontrolled wildfire. This is usually due to the season and weather conditions at ignition.

Nevertheless, fire, whether prescribed or natural, can have an adverse impact on those cultural resources made of wood such as historic structures or scarred trees. Also, recent research has shown that stone artifacts will spall, crack, or break when temperatures reach 300°C. Potsherds can change color and alter their paints and glazes when temperatures approach 500°C. Fire can also affect many accepted dating methods such as carbon-14, obsidean hydration and archeomagnetic. Carbon-14 samples may become contaminated from ash or charcoal produced by a fire and may yield a date more recent than the true date of the sample. Obsidean hydration is a dating technique that measures the amount of moisture present in the external surface of an obsidean artifact. Heat from a fire (either natural or man caused) can alter this moisture content thus yielding an earlier date than is in fact the case. Finally, archeomagnetic dating measures the alignment of electrons in samples from prehistoric hearths. If these features are subjected to temperatures above 525°C., erroneous information may be obtained (Philles:1982).

Fire can also be a benefit to archeological resources by removing duff and vegetation that obscures artifacts and sometimes entire sites. Examples of this have been recently observed at Custer Battlefield National Monument and during the identification portion for the Lolo Trail study (McLeod:1982).

While fire is indeed a natural part of the ecosystems discussed in this overview, its effects (whether positive or negative) must be considered by archeologists working in the forested environments of the northern Rocky Mountains.

E. Fauna and Flora

The Bitterroot Mountains of western Montana and north-central Idaho sustain a wide variety of big game species. Both species of deer (mule and whitetail), as well as elk, Rocky Mountain goat, and moose are found on both sides of the Bitterroot Range. Caribou were also common in western Montana until approximately 1870. Other mammals common to the area include black bear, mountain lion, lynx, and coyote, as well as a variety of small rodents, and fur bearers.

The population of any given species can fluctuate greatly depending upon a variety of ecological factors at work at any one time. For instance, during the Lewis and Clark Expedition (1805 and 1806), the scarcity of large-game animals nearly caused starvation of the party (Devoto 1953:406). This scarcity of game animals was possibly due to a uniform distribution of climax forest vegetation causing a reduced amount of suitable habitat (i.e., winter range areas) for large-game species.

This condition has gradually changed since the major forest fires of 1910, 1919, 1929, and 1934. In western Montana and north-central Idaho, vast acreages of deadfall and overlying mature timber were burned (Koch 1934:99). However, the areas were quickly revegetated with a variety of grasses, shrubs, and brush, creating an ideal browse habitat for many big-game species. Consequently, elk and deer herds have sharply increased since the early 1900's (Diebert, personal communication:1983). The positive effects of fire on big-game habitat were

known by the early Native American inhabitants of the Northern Rocky Mountains. Periodically, fires were started by these groups, specifically for improving big-game hunting areas (Malouf, 1969:271-290). More recently, modern logging and slash disposal practices by burning have continued to clear vast acreages of deadfall and overly mature timber.

Fisheries resources in western Montana and specifically the Bitterroot River and its tributaries included several native species of trout (cutthroat and dolly varden), while suckers, whitefish, and squawfish were also present. Grayling were also known to occur in some high elevation lakes in the Big Hole Valley and the Sapphire Range (Munther, Pers. Comm.,1983). Even though the Bitterroot River is a tributary of the Columbia River System, anadromous fish species (salmon and steelhead) are not found in the Bitterroot River. However, these species do exist west and south of the Bitterroot in the Lochsa, Selway, and Clearwater River Systems, as well as the Salmon River and all tributaries of the Snake River below Shoshone Falls. The anadromous fish provided a predictable food resource, easily obtainable in large quantities at specified times of the year for many Native American groups on the Idaho side of the Bitterroot Divide (Anastasio, 1972:169).

F. Geothermal Areas (Hot Springs)

The Lolo and Bitterroot National Forests both contain a number of natural hot springs within their boundaries. Many of these areas are small springs or seeps that maintain a constant temperature and do not freeze in the winter. Others are sizable flows that produce hot water throughout the year.

Hot springs were used during the prehistoric periods by Native Americans possibly for religious purposes. Flint (1977:104) noted the proximity of religious sites to hot springs in the Bearmouth study area and suggested they were important for obtaining religious powers. The Lewis and Clark Expedition took advantage of Lolo Hot Springs both in 1805 and on their return journey in 1806. Clark described how the Indians had dug holes in the hot springs for bathing purposes (Thwaites, 1969, Volume 3:64).

Many of the significant hot springs within or adjacent to the Lolo and Bitterroot National Forests have undergone commercial development, and any prehistoric site evidence has long since been obliterated. Lolo Hot Springs on the Lolo National Forest and Sleeping Child Hot Springs on the Bitterroot National Forest are good examples.

III. ENVIRONMENTAL SETTING PART II: LATE PLEISTOCENE-MID-HOLOCENE

Man's interaction with the environment from his earliest recorded presence up to the present day has long fascinated archeologists because of the insight into culture change which this information offers. By examining past environments, archeologists and other scientists can learn about the climate, types of animals, the variety of plant resources present, etc. This, in turn, allows archeologists to suggest the probable land use and subsistence strategies, as well as other cultural patterns of native groups, and how these might change through time.

This chapter sets a framework for inferring the various Pleistocene environments in the study area. The bases of the framework are studies of pollen, sediments, paleo-fauna, glacial geology, tephra chronology (volcanism), and finally, interpretation of the role that Glacial Lake Missoula played in pleistocene times.

A. Sediment/Pollen Studies Conducted Within or Adjacent to the Study Area

There have been a number of studies of cave sediments in Idaho and pollen spectra from bogs in Montana (see Figure 2). These have been used to construct a fairly detailed picture of changing climates through time. Three of these studies were chosen as best documenting the changing environments. These three are first, an interpretation of sediments, primarily from cave and rock shelter sites in Idaho (Butler 1978), and the other two are pollen studies from bog sites in Montana (Mehringer, et al., 1977, Mack, 1982, and Mack, et al., 1983). One point to bear in mind is that the differences between dates and climates are more likely to be the result of varying local environments rather than differences in the macro-environment (and climate). To date, the area covered by both Forests has not received detailed analysis of some micro-fauna which has proved useful in reconstructing environments in Idaho. This is discussed in greater detail below.

The climatic sequence proposed by Butler (ibid.) is divided into nine periods. These date from 15000 radiocarbon years before present to today. The chronology is based largely on his interpretation of events at Owl and Wilson Butte Caves. This sequence is a refinement of Swanson's (1972) sequence, which was based on Bison and Veratic rock shelter stratigraphy. Figure 3 exhibits the climatic trends and interpreted environments through time.

Mehringer's, et al., (ibid.) work is based on a series of cores taken from a bog at Lost Trail Pass, Montana. Although this scheme is not as chronologically refined as Butler's, it nonetheless shows the same general trends and provides more detailed insight to the changing frequency (which is assumed to represent changing types) of vegetation. Figure 3 exhibits the detailed sequences.

The Final Study, Mack (ibid.), Mack, et al., (ibid), was conducted at two locations adjacent the Kootenai River Valley. This study shows the same general trends as the other two studies but again refines the sequence of changing vegetation for a particular area. The area covered in this study may be applicable to the northern portion of the Lolo National Forest. Figure 3 exhibits the sequence proposed by Mack.

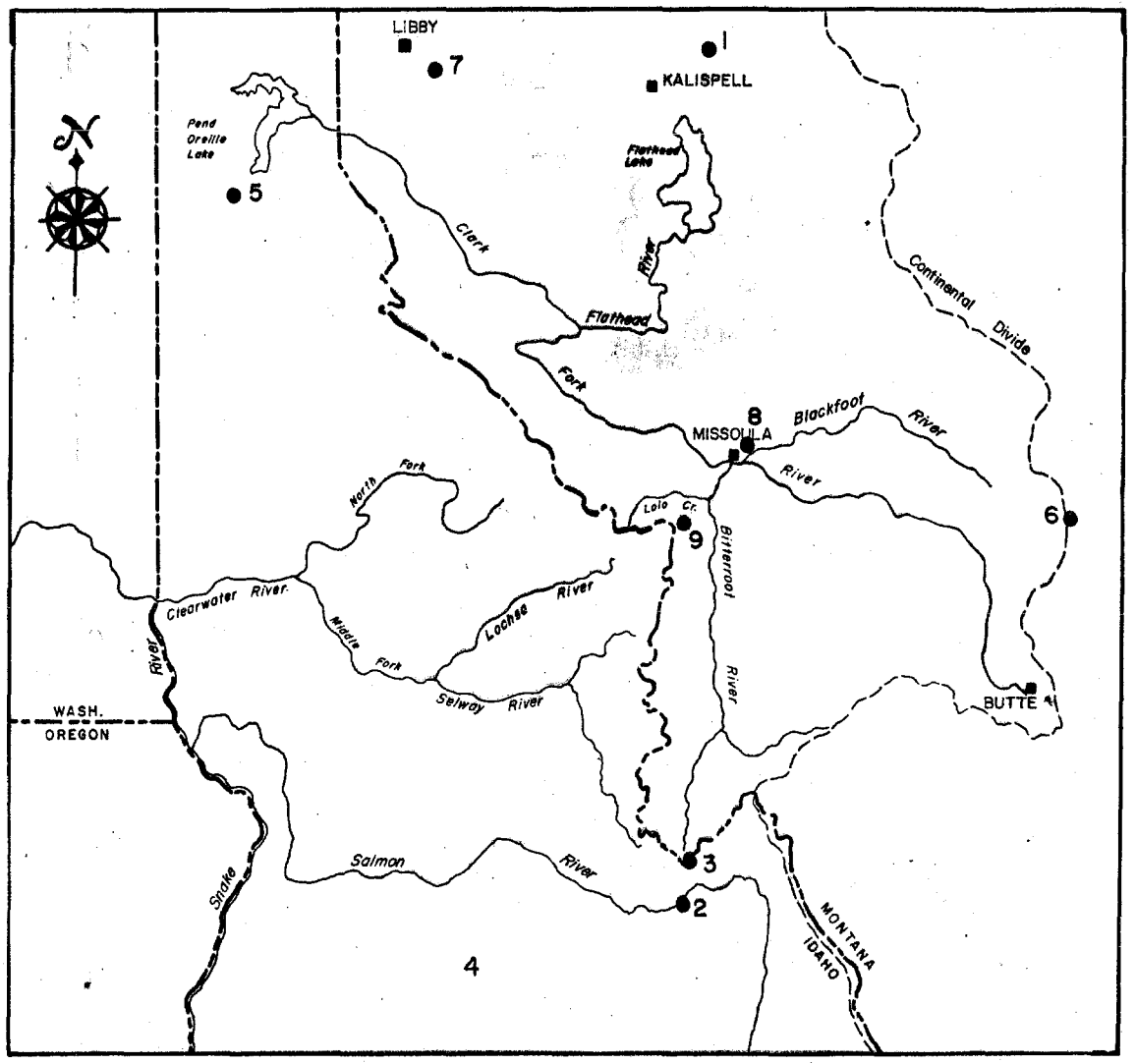


FIGURE 2 : Map showing relative location of Paleo-environmental studies in western Montana and north and central Idaho.

1. Hansen, 1948, and Huesser, 1969
2. Swanson, 1972
3. Mehringer, et al., 1977
4. Butler, 1978
5. Mack, et al., 1978
6. Brant, 1980
7. Mack, et al., 1983, Mack 1982
8. Mehringer, et al., unpublished
9. Mehringer, et al., unpublished

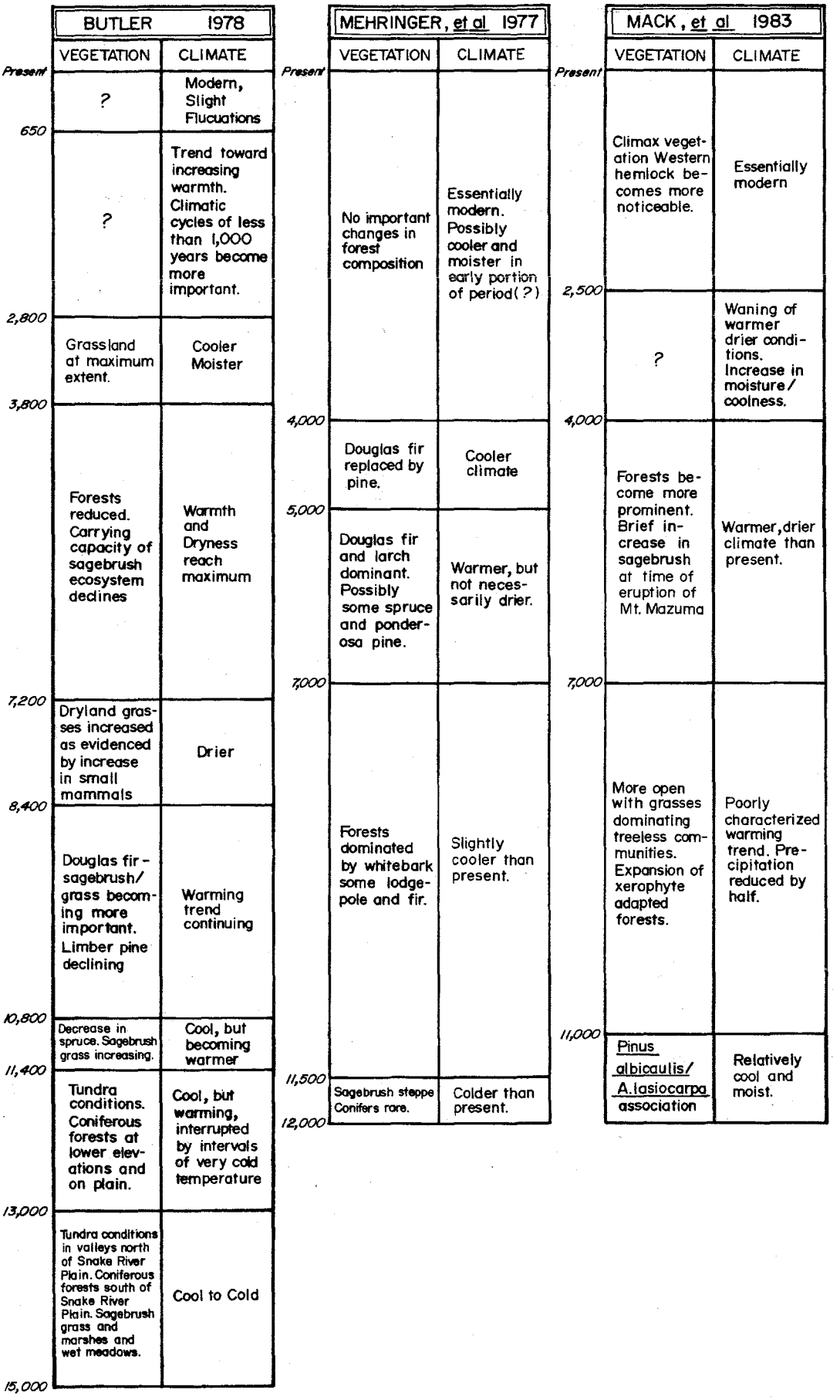


Figure 3 Climatic trends and related vegetation.

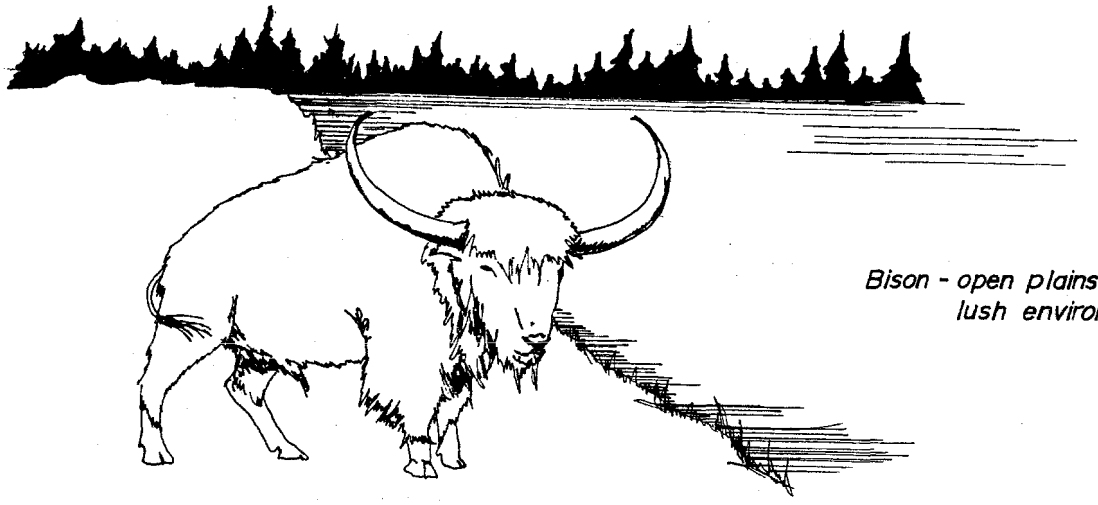
All three schemes show the same general trends: pollen frequencies interpreted as a change from tundra-like conditions, a climatic period which seems to be substantially warmer and may as a result be much drier, and a minor surge of alpine glaciers with a concomitant return to cooler conditions, followed by return to drier conditions, then punctuated by brief returns to cooler conditions. The effect of each of these climatic conditions has been and still is the source of considerable discussion among archeologists. Perhaps one of the most hotly debated topics deriving from this is what effect the warming climate had on human populations in the lower elevations. There are two extremes to this argument: 1) the mountainous areas served as refuge when the climate became dryer at lower elevations; and 2) sites of this time period appear to be missing in lower elevations because subsequent geologic processes have destroyed them. In either case, there would not have been a hiatus of occupation in the general area.

B. Paleo-Fauna that Existed Within or Near the Study Area

One avenue of research which many investigators tend to ignore is the subtle changes shown by the small animals in the region. Butler's scheme described above was enhanced by his observations on Townsend ground squirrels and pigmy rabbits. Based on current knowledge of these animals habitats, we can infer climate. Butler graphed frequencies of change in these populations. He was then able to compare this information to pollen sequences and further refine these. Butler also compared his rodent sequences to sediments in the cave which showed similar change. He was able to conclude that changing rodent populations imply a significant change in the climate of the region. Similar studies have yet to be conducted in Montana. This is due to a lack of stratified sites and almost no published research on late pleistocene paleontology.

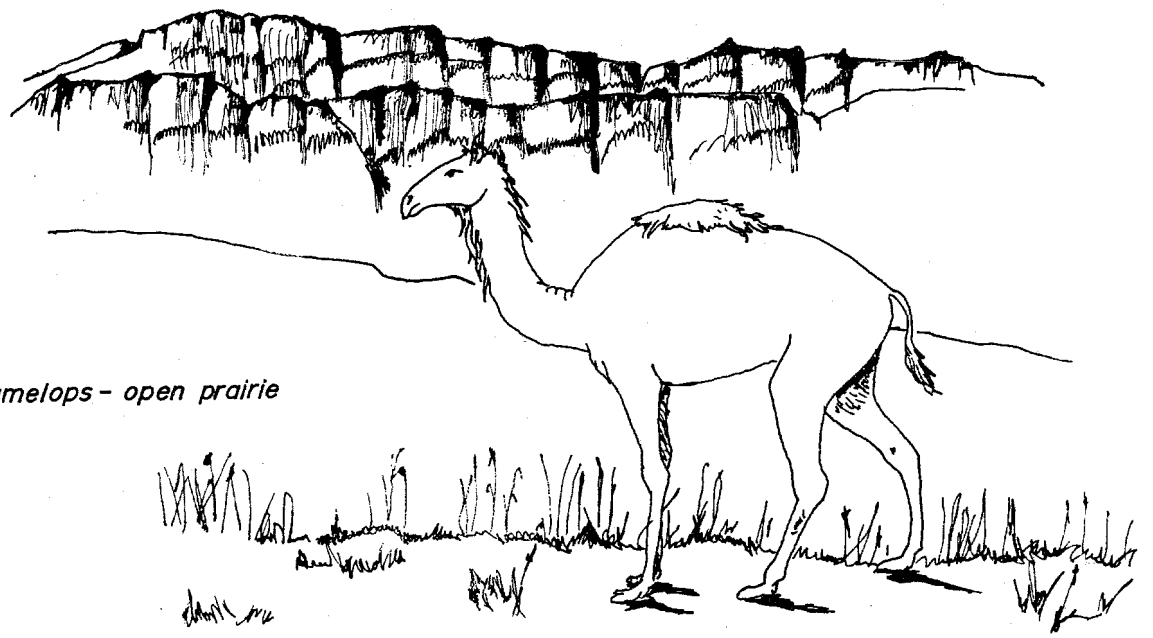
Most faunal studies in western Montana have concentrated on larger species. A wide variety of animals inhabited the areas covered by and adjacent to the Lolo and Bitterroot National Forests during this time period. Among the more spectacular are the musk ox, long-horn bison, Bison antiquus, Bison occidentalis, elephant, and caribou. All of these are now extinct in the area. Figures 4a, 4b, and 4c provide some idea of what these animals looked like. Figure 5 gives some occurrences from within the study area (east-central Idaho and western Montana). If one includes data from southern Idaho, the fauna record increases to include ground sloth, camel, and a variety of other animals.

Also, early dates are associated with many animals currently found in the region. These would include dates of 9630 ± 300 B.P. (GSC - 1394) and 9760 ± 160 (I - 8579) on elk in Alberta (Harrington, 1978), bighorn sheep in British Columbia at 9280 ± 200 (GSC - 1497) (Rutter, et al., 1972), and 8550 ± 270 (RC - 873) in southwestern Alberta (Driver, 1982). Caribou are known from pre-10000-year-old deposits in southern Idaho (Anderson and White 1975). Also surprising are late dates such as 7670 ± 170 (I - 244) (Harrington ibid.) on mammoth in British Columbia. Bison may have been a very early inhabitant of the region. If the species designation is correct, then a possible Bison latifrons locality (UMVP 7601) near Corvallis, Montana, may be as old or older than 20000-30000 B.P. (cf. MacDonald, 1981). This, however, remains to be verified. Carnivores present include big brown bear (the big in this case being somewhat understated), wolf including dire wolf in Idaho, pleistocene lion, and a variety of smaller carnivores which are present in the area today.



Bison - open plains and lush environments

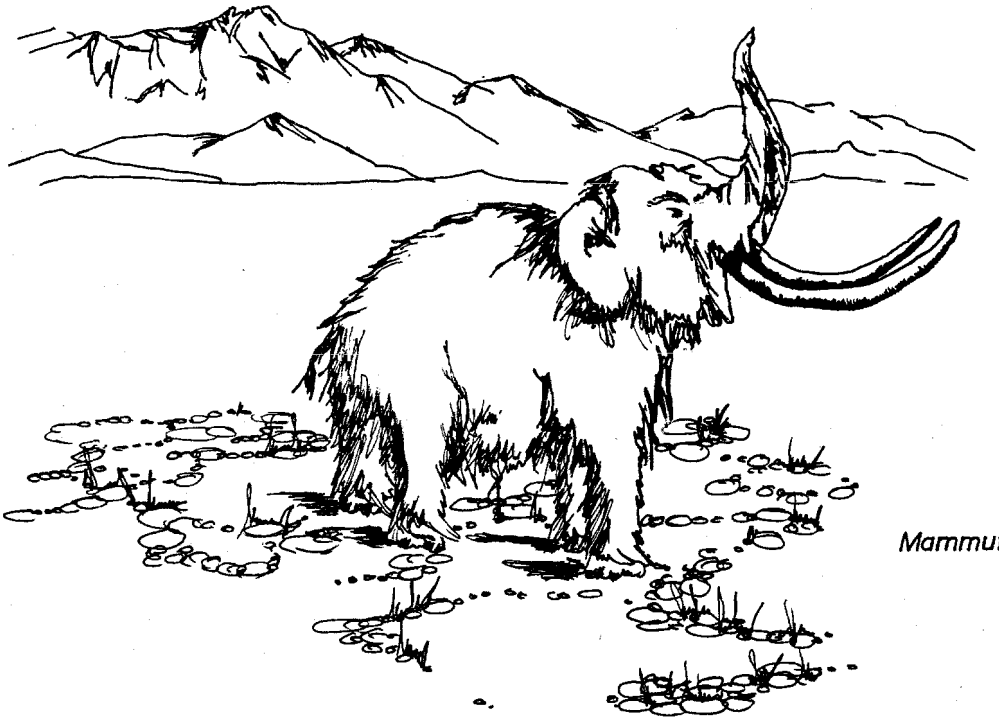
Longhorn bison (Bison latifrons, Bison priscus, Bison antiquus, and Bison antiquus occidentalis) are known from archeological and paleontological sites throughout North America. It is suggested that these forms did not become extinct but evolved into the modern form (Bison bison) found today in North America (Wilson, 1980, and MacDonald, 1981). Longhorn bison are known from eastern and southwestern Montana and possibly the Bitterroot Valley.



Camelops - open prairie

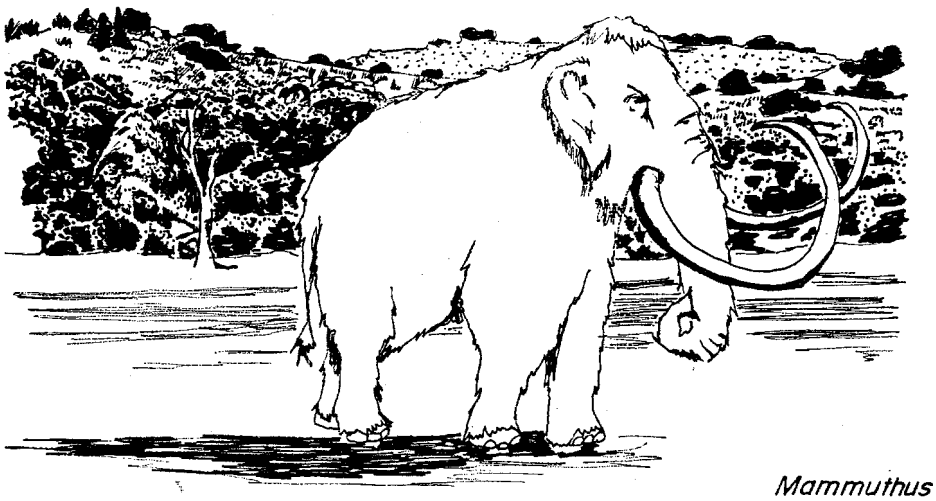
The Late Pleistocene camelops resembled the llama found in South America. Again, the occurrence of fossil camels was widespread and of considerable timedepth in western Montana. The relationship between man and camelops is unclear (Haynes and Stanford, 1984). According to Kurten and Anderson (1980:305), most camel finds are assignable to camelops hesternus. This species became extinct about 11000 years ago. Fossil camels of a Late Pleistocene age are known from the Flint Creek Valley where they are found associated with fossil horse remains.

FIGURE 4(a)



Mammut - open plains

The American mastudonts are less well known as a group than their relative the mammoth. They are distinguished from mammoths by their tooth pattern, skulls, and tusks. This genus is found primarily in the eastern woodlands of North America; however, an earlier type was found in a gravel pit near Deer Lodge, Montana. This species became extinct between 9000 to 12000 years ago.



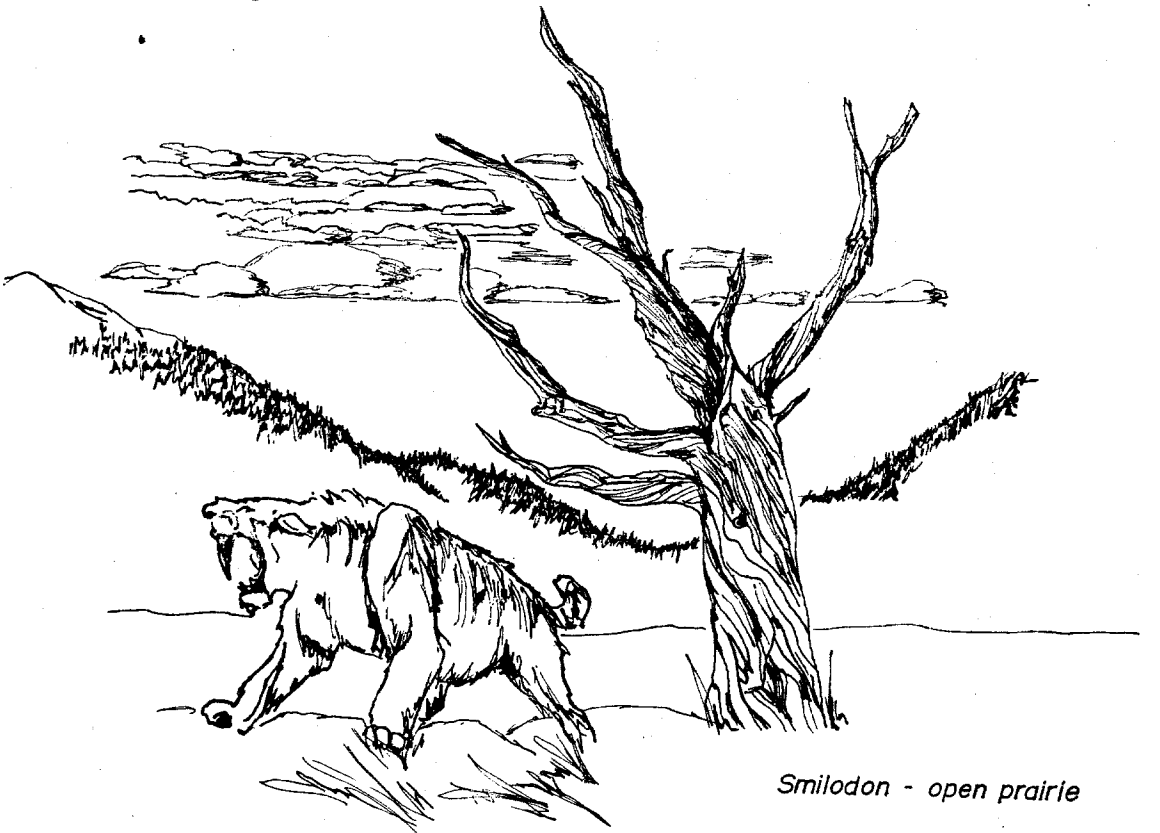
Mammuthus - open prairie

Mammoths have been found at many sites throughout the United States (including Montana) and Canada. Clovis points (see Figure 10a), are usually the diagnostic artifact usually associated with mammoths. The mammoths became extinct approximately 11000 years ago. Early man may have played a significant role with the extinction of this species.

FIGURE 4(b)

Symbos- boreal forest and low spruce bogs

Woodland musk ox are an extinct form of musk ox formerly found throughout North America. This animal was probably adapted to warmer conditions than the musk ox of today (which is found only in the Artic). A woodland musk ox was found near Rogers Pass east of the Continental Divide. This species also became extinct about 11000 years ago.



Smilodon - open prairie

Sabertooth cats (there are several species) have been found in many different areas of North America. They are particularly abundant in the Rancho LaBrea Tar Pits in California. An older form of this species was found near Whitehall, Montana. This genus may have survived until roughly 8000 years ago.

FIGURE 4(c)

LATE PLEISTOCENE ANIMALS FROM MONTANA AND IDAHO

(Source - Butler 1978, W. Melton 1979, n.d., Rasmussen 1974, Forbis 1955)

IDAHO	MONTANA
Big Brown Bear	Big Brown Bear
Big-Horn Sheep	Big-Horn Sheep
Camel	Camel
Caribou	Caribou
Fox	Fox
Gopher	Gopher
Ground Squirrel	Ground Squirrel
Horse	Horse
Long-Horn Bison *Bison latifrons* *Bison antiquus*	Long-Horn Bison *Bison latifrons* *Bison occidentalis*
Modern Bison *Bison bison bison*	Modern Bison *Bison bison bison* *Bison athabasqua*
Coyote	Antelope
Dire Wolf	Beaver
Domestic Dog	Cervid (species unknown)
Extinct Lion	Deer
Ground Sloth	Elephant
Sabertooth Cat	Lynx
Small Rabbits	Marmot
Wolverine	Mountain lion
	Mouse
	Rabbit
	Woodland Musk Ox
	Wolf

FIGURE 5

C. Volcanic Ash Studies Conducted Within the Area

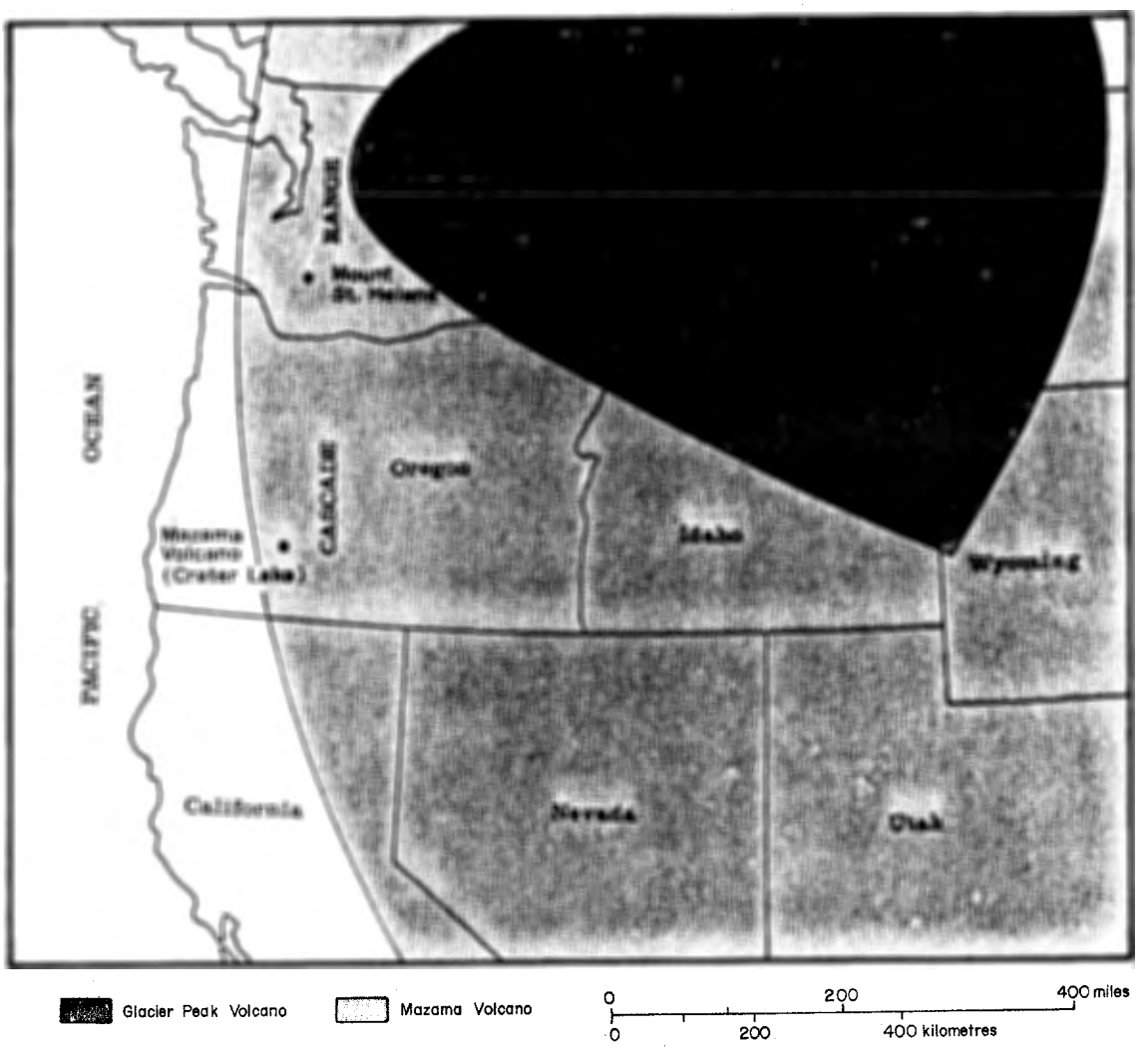


Figure 6 Distribution of late Pleistocene and mid-Holocene volcanic ashes. (Modified from Lemke et. al. 1975:H2)

The Bitterroot and Lolo National Forests have experienced several volcanic eruptions, the most recent of which was the May 1980 eruption of Mt. St. Helens. Two other known volcanic eruptions also left their mark on the Forests during the Late Pleistocene and Early Holocene. These are the eruptions of Glacier Peak in the State of Washington and Mt. Mazama (now Crater Lake) in Oregon. Both of these are recognized as thin, light colored bands (usually white) in sediments, and they have been successfully used to date archeological sites in Montana and elsewhere.

Glacier Peak ash has been dated between 12750 ± 350 B.P. (W-1644) (Lemke, et al., 1975), and 10680 ± 100 B.P. (TX-3659) (Mack 1982). Based on analysis of

dated samples, Mehringer, et al., (1984) have recently suggested a date of 11200 B.P. be used. Mehringer, et al., (1977) based on their studies at Lost Trail Pass, Montana, have suggested that two ash falls occurred, separated by 25 years. These authors further suggest (ibid., 1984:40) that at least one of these occurred during the late summer or early fall. Based on analysis of pollen studies, the ash had little apparent effect on vegetation (Brant 1980, Mack, et al., 1983, and Mehringer, et al., 1977). Although no one has of yet conducted studies within the region on the effect of these ash falls on early man, we suspect that results would be similar to that shown by vegetation. Figure 6 exhibits the distribution of this ash from its source in Washington State.

The second eruption, Mt. Mazama, has been widely dated at ca. 6700 B.P. (Fryxell, 1965). This ash fall has long interested archeologists in its possible effects on human populations. We know from historically recorded volcanic eruptions in such places as Alaska and Iceland, that even small amounts of volcanic ash can harm vegetation and animals. The occurrence in Montana of Mt. Mazama ash in deposits of up to 76 centimeters (2.5 feet) (Lemke, et al., 1975:H.27) 1/ would suggest a substantial ash fall. This has led some researchers to hypothesize that this caused an ecological crisis which may have ended with an eastward migration of people (Mallory, 1968). On the other hand, researchers working along the Snake and Columbia Rivers, closer to the source, have seen little change in archeological assemblages above and below ash deposits suggesting that no such migration took place (Bense 1971). Given the fairly thick deposits in some areas, we suggest that the ash fall may have had a short term effect on human populations which may not be reflected in the archeological record. Similar events are known ethnographically to have effected populations, albeit briefly (Teit 1930).

Most researchers agree that there was very little effect on vegetation, although Mack, et al., 1983, has noted a short term increase in grass pollen. Blinman, et al., (1979:408) suggest that Mazama ash was rapidly deposited in the autumn, followed by a second deposit prior to the following winter (1 year later), and by a third deposit in the spring (2 years later). Melton (1984) has suggested that this ash might be used to distinguish between the earlier and later cultural periods in the present study area.

Volcanic ash is mentioned here because of its usefulness as a time-stratigraphic marker. For example, the Indian Creek archeological site near Townsend, Montana, underlies Mazama ash and overlies Glacier Peak ash (Davis 1984). This allows for fairly precise dating of the occupation of the site.

D. Glacial Geology of Western Montana

The late pleistocene environment of the Lolo and Bitterroot National Forests is linked to fluctuations of continental and alpine glaciation. This includes the final portion of the last "ice age" and subsequent deglaciation of the area.

The results of glacial advances and retreats are still seen on the landscape today. This includes drumlins, kettle lakes, moraines, kame terraces, etc. To date, no one has yet attempted to relate these topographic features to

1/ Although this is a secondary deposit, the accumulation of ash in this amount would suggest the ash fall may of been of some depth.

settlement and subsistence patterns, although this will probably be done in the future. To list all the detailed studies of glacial deposits would be the subject of a large volume far beyond the scope of this work. The reader is referred to Richmond et. al. (1965) and Alden (1953) as the standard references on regional glaciation of the study area.

Figure 7 exhibits correlations of midcontinental Rocky Mountain and cordilleran (Pacific coast) glacial chronologies. Localized alpine glaciers have not yet been the subject of the same amount of research and despite some differences in timing (Stoffel, 1979 and Dea, 1981) most are placed in one of the three frameworks mentioned above.

A significant question to archeology is the time deglaciation occurred. It has been widely held that man could not have entered the area prior to deglaciation. The earliest date, 13430 ± 450 B.P. from southeastern British Columbia (Ferguson and Osborn, 1981) would suggest some time depth to this event. It does, however, need to be pointed out that this date may be in fact anomalously old, due to incorporation of "dead carbon" into the dated clam shells (Claque, 1982). However, this date appears to agree with pollen studies discussed above.

Studies of alpine glaciers have yet to be performed in sufficient detail to trace the timing of their recession, although a relative chronology of some moraines has been attempted for the Jocko Valley (Elison, 1981). If man did not occupy the area prior to the last deglaciation, then these would allow archeologists to establish a set of early limiting dates on occupations for specific portions of the region.

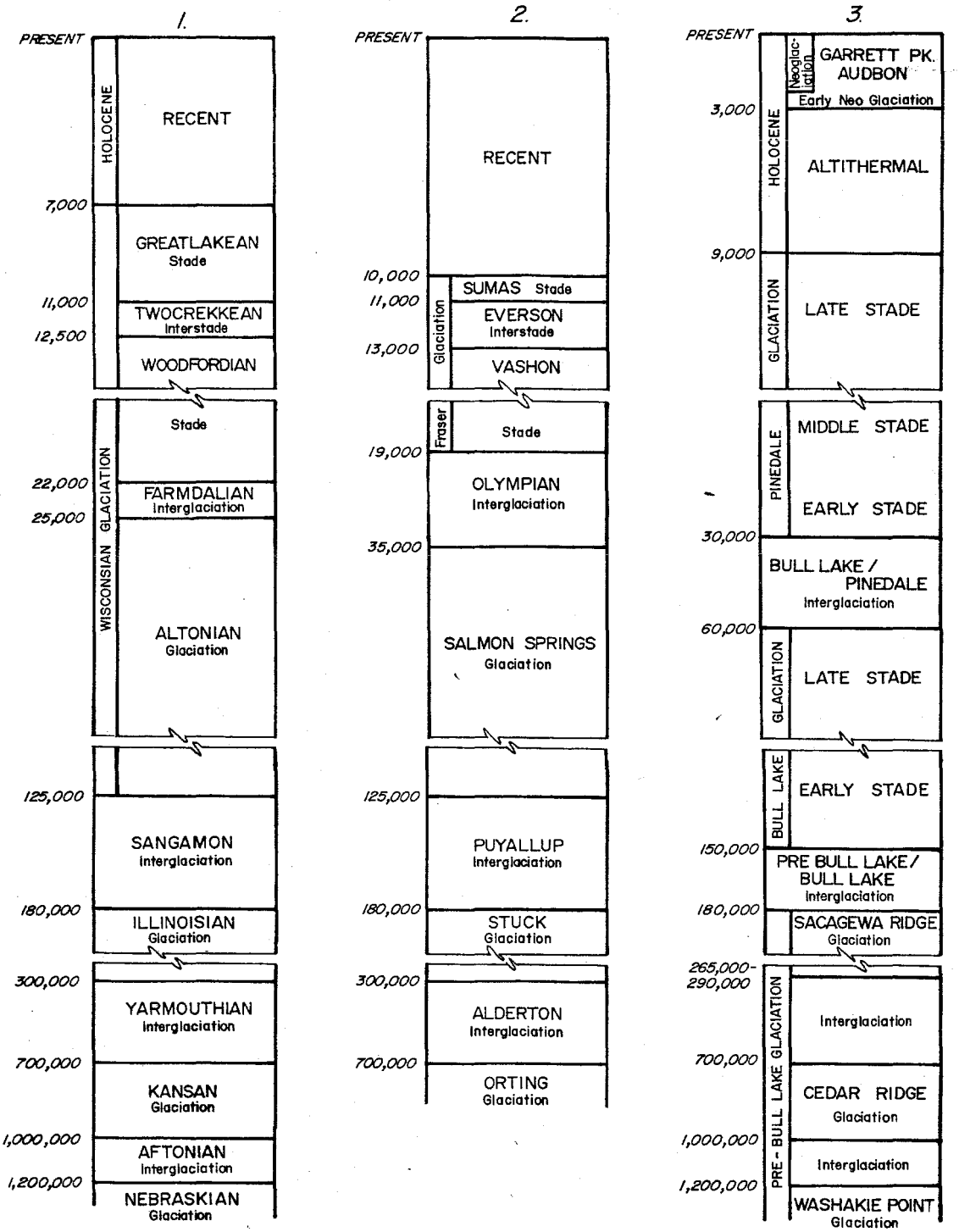


Figure 7 Chart showing correlations of mid-continental (1), cordilleran (2), and Rocky Mountain (3) glacial chronologies modified from Stoeffel (1979: 15, 27).

E. Glacial Lake Missoula; its Distribution and Time Span

Of all the events occurring during this time period, the most spectacular and one of the most controversial events is the final draining of Glacial Lake Missoula. As further work is being conducted and older works reexamined, it is becoming increasingly clear that the traditional view of a late date for Lake Missoula's existence is inaccurate. Before discussing Lake Missoula's final draining, it might be useful to describe the lake itself.

This lake was one of the largest of a series of Pleistocene lakes throughout the interior of northwestern North America. It covered a total of 2900 square miles and held slightly more than 500 cubic miles of water. The lake was dammed near Clark Fork, Idaho, by the Pend d'Oreille lobe of the cordilleran ice sheet (Alt, 1976:35). The waters impounded by the dam reached a maximum depth of 2000 feet. When the water reached sufficient depth, it would float the ice dam, releasing tremendous volumes of water. These floods are responsible for the creation of the channel scablands in eastern Washington, which gives an idea of the amount of water being discussed. Alt (ibid.) suggested that the rate of flow may have been as much as 200 times more than the Missippi River at peak flood stage. Curry (1977:34) has said that peak drainage would have lasted about 1 to 2 days, and the entire lake would be completely drained within 2 weeks.

Estimates of the number of times the lake drained has ranged from 36 (Chambers, 1971,) to 40 (Waitt, 1980), although, Bunker (1982) has suggested that 40 may be too great. Curry (1977) hypothesized a 58-year maximum for each refilling of the lake. Bunker (1982) has also pointed out that there may not be the one-to-one relation between varve sets and flooding that many authors have assumed. Limiting dates for the final lake are 17500 B.P. (Waitt, 1980) and ca. 13000 B.P. (Mullineaux, et al., 1978). Following the last draining, a number of authors have suggested that the lake refilled but not to its former extent (Curry, 1977, Bunker, 1982, Alden, 1953, and Pardee, 1942). It has also been suggested that this resulted in a period of "unspectacular" lake draining (Curry, 1977:33). Bunker (1982) for example, has found a series of 11 floods above this date in Badger Coulee, Washington.

Figure 8 shows the location of the lake in western Montana.

Traditionally, archeologists have long viewed Lake Missoula as existing fairly late in time-- ca. 6000 B.P. (Malouf 1956 a, b; Griswald 1953, Ryan 1977, and Larom n.d.). This hypothesis was based solely on the perceived lack of archeological sites assignable to earlier cultural periods or phases within the Region.

The nature of the features associated with Glacial Lake Missoula has also hampered archeological interpretation. Narrow beaches which can be measured in yards or at best in cubic yards, buried deltaic deposits, and overlying postglacial deposits have hindered the archeological interpretation of Lake Missoula. Larom (n.d.) suggested that the margins of the lake may have once been occupied by early man.

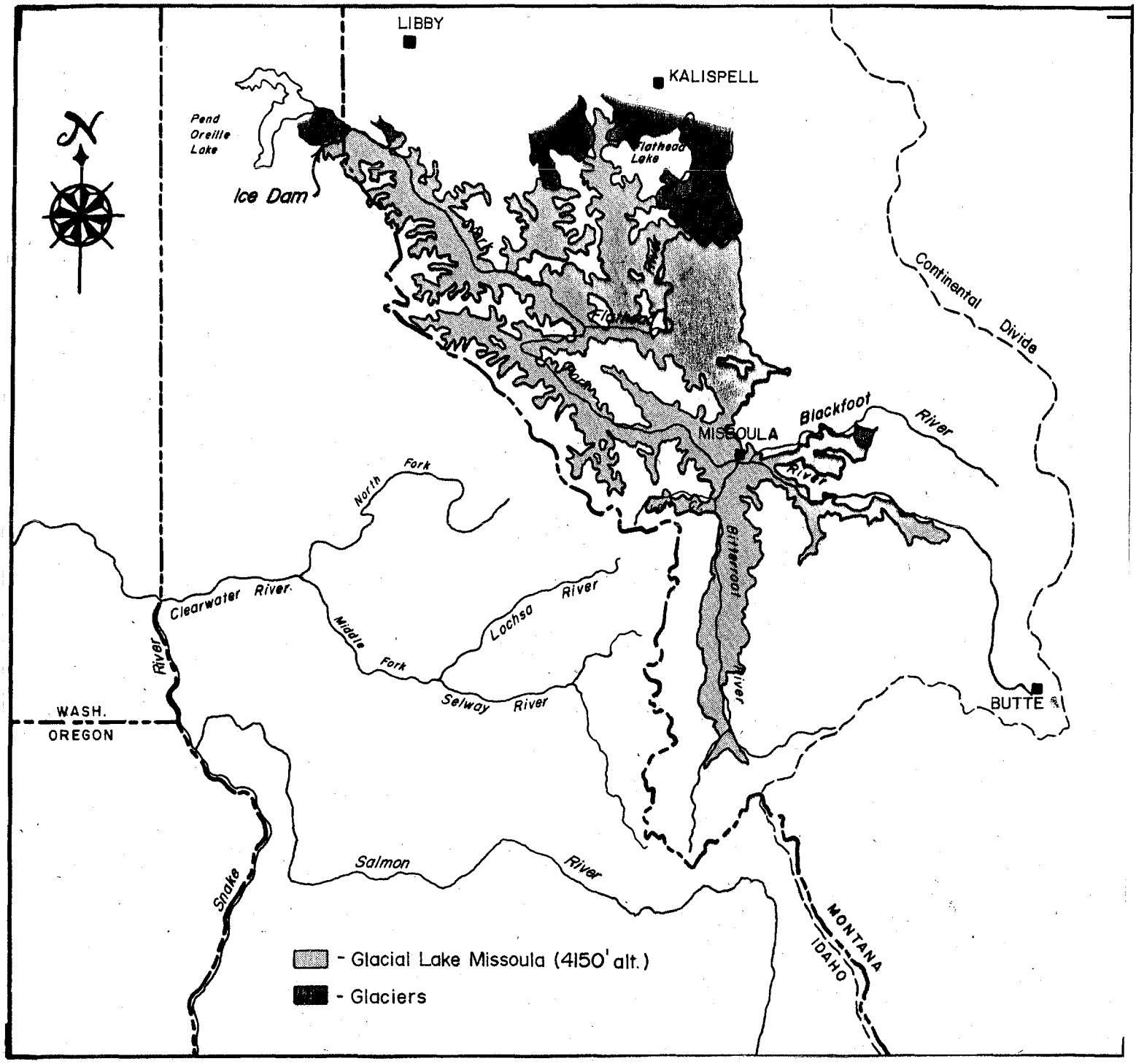


Figure 8 Extent of Glacial Lake Missoula ca. 13,000 B.P.

F. Summary

The Late Pleistocene-mid-Holocene reflect the changing environment brought about by large scale climatic and geologic events. The climate immediately following deglaciation was probably much cooler than at present. Pollen diagrams and sediment studies show a long-term warming trend. This is corroborated by the disappearance of cold adapted animals and an increase in various dry-land adapted mammals. The earliest evidence of humans in the study area dates to this warming trend. The role that various geologic processes such as glaciation and volcanic eruptions played in human adaptations is currently difficult to assess. They likely played some role that we as of yet cannot determine. The introduction of man, however, certainly has altered the environment.

IV. PREVIOUS ARCHEOLOGICAL INVESTIGATIONS IN WESTERN MONTANA AND EAST-CENTRAL IDAHO

A. Academic Archeological Research Conducted Within Western Montana and East-Central Idaho

Detailed archeological research began fairly late in western Montana compared to elsewhere in the United States. Prior to 1950, only two reports had been written. Morton J. Elrod discussed pictographs in the Flathead Lake area (Elrod, 1908) and H. H. Turney-High reported on two burials (Turney-High, 1937). Since then, the majority of archeological research in western Montana has been conducted by faculty and students from the University of Montana.

During the early 1950's, Dr. Carling Malouf of the University of Montana initiated a series of surveys throughout western Montana. These areas included: The Missoula Valley (Moomaw, et al., 1952), the Blackfoot River (Jelks, n.d.), the "Hellgate Survey" (Griswald and Larom, 1954), the Lower Clark Fork River in Montana (Malouf, 1982), and the Flathead Lake Region (Griswald, 1953). Malouf additionally edited a series of papers that dealt with unique site types such as battle pits (White, 1959) and scarred trees (White, 1954). Malouf incorporated all the then available evidence and formulated what he called the "Montana Western Region."

Recent findings, discussed here for the first time, reveal several interesting features peculiar to the archeology of this region. They are sufficiently distinctive to justify referring to it as a separate archeological territory which we shall designate as the "Montana Western Region." (Malouf, 1956 a:47)

Malouf (1956 b) expanded this concept and detailed what he saw as a unique chronological sequence that, in comparison to other areas of the State, began quite recently. Although subsequent work has proven Malouf to be overly conservative in his interpretation of the time involved, his work still remains as one of the major contributions to the prehistory of the western part of the State. Many of Malouf's ideas are discussed more thoroughly elsewhere in this document.

Following Malouf's synthesis, a limited number of site reports such as Camas Creek (Jenni, 1963), the Richardson farm site (Arthur, 1963), and small surveys (Sullivan, 1957) appeared. The area closest to the Continental Divide also appears to become the subject of greater investigation. Portions of the upper Blackfoot River were surveyed (Napton and Carmichael, 1964). Napton (1965) reports on a survey ranging from Avon northward to the Clearwater River.

After about 1965, only a few scattered reports are known from or near the areas covered by the Lolo and Bitterroot National Forests. Tro and Tro (1968 a) report on a survey and excavation of two sites on the Clearwater River. They (ibid., 1968 b) also were the first to formally report the Devil's Eyebrow quarry site. Richard Malouf (1979) conducted excavations at a possible root roasting site near Potomac during this time. During 1969, C. Barnier surveyed the National Bison Range and other portions of the Lower Flathead Valley (Barnier 1971, Barnier and Alt 1971). Most of the archeological research conducted by the University of Montana was further north along the Kootenai

(Taylor 1973) and Flathead Rivers (Fredlund and Fredlund 1971). Unfortunately, the results of the University of Montana's excavations at the Avon site which dates about 9500 B.P. (Davis 1982) are not yet available.

Most of the archeological research during the early 1970's was concentrated in the Bitterroot Valley (Ward 1973) and adjacent mountains (Fredlund 1970, Lacombe n.d., Lacombe 1971, and Fredlund and Lacombe 1971). Several sites of interest include a number of talus pits which are interpreted as hunting sites. One of these, the Dalton Lake site, was tested (Hogan, 1974). This site, based on projectile point typology, showed use on an intermittent basis for several thousand years. Most of these reports suggest that there is a strong affinity to various point types (and hence cultures) further east. This period also shows the development of contract archeology in the area. This is discussed below.

B. Consultant Archeological Work (Contract Archeology) Conducted Within the Study Area

Non-Forest Service archeological investigations paid for by contract are as yet rare in much of west-central Montana. To date, only a few surveys, tests, and excavations have been conducted via contract. Without going into detail and beyond the scope of this report, contract archeology is simply the paying of a person or firm to conduct archeological research. This is done primarily by companies working on Federal and state lands or federally funded projects that need to comply with various laws regarding cultural resources.

The earliest contract investigations were surveys and test excavations for the State Highway Department (O'Brian 1974, Smith 1974, and Taylor 1975). None of the excavations uncovered significant artifacts. Since then, the highway department has conducted additional survey work, both by the University of Montana and private contractors. Other types of contract surveys include inventories of fishing access sites (Aaberg and various others), inventory of a subdivision addition in Lolo (Melton 1980), inventory of sewage treatment plants (Taylor and Till 1979), inventory of the Council Grove State Monument (Taylor 1979), and other small projects.

Other types of nonsurvey projects include a literature search of the Thompson Falls Dam (Munson, 1980) and a subsequent evaluation of the dam site's National Register potential (Bowers and Hanchette 1981).

The single excavation within the Lolo/Bitterroot National Forests conducted under contract was at Big Creek Lake. Here a series of 1 by 1 meter units were excavated. Six separate occupations were noted at the site (Fredlund 1979). This excavation is discussed in much greater detail in Chapter VIII. This project was sponsored by the Heritage Conservation and Recreation Service.

During the late 1970's, the University of Montana conducted survey (Flint 1977) and test excavations (Flint 1979, 1980, and Taylor 1976) in the Bearmouth area. Flint (1982, 1983) has gone on to develop a model of cultural change and attempts to correlate it with the ethnographic record using data from the area. The particulars of this model are discussed later.

Ryan (1977) conducted a survey along the Clark Fork River between Missoula and Superior, Montana. All cultural periods appear to be represented, although the

earlier ones in fewer numbers. This survey's findings are also discussed in greater detail in Chapter VIII.

Between 1982 and 1984, Archeological and Historical Services, a consulting firm from Eastern Washington University, conducted a cultural resource inventory for the Bonneville Power Administration's 500 KV transmission line. This inventory included the proposed powerline right of way from Garrison to Taft, as well as related project disturbances such as proposed roads, gravel pits, and "fly yards." The final report for this project was published in 1984

Current ongoing research includes the following: a survey of portions of the Rattlesnake Wilderness Area by the University of Montana, reexamination of portions of the Stateline Trail, and examinations of Early Period cultural manifestations near Placid Lake by University of Montana graduate students.

C. Forest Service Archeological Projects

The Lolo and Bitterroot National Forests have long recognized the value of prehistoric sites and have made genuine efforts to protect them once they were identified. One example of these efforts occurred during the 1930's when "prehistoric animal tracks" were discovered during construction of the St. Regis Cutoff Road. Attempts were made to ensure their preservation by covering them with a large wire mesh. Another example of the Forests' concern for prehistoric resources was the Magruder Corridor Archeological Survey sponsored by the Bitterroot National Forest in the late 1960's (Thomas and Turner, 1969).

Increased attention and specific legal requirements for consideration of prehistoric sites, as well as all forms of cultural resources, began with President Nixon's signing of Executive Order 11593 in 1971. Specifically, this order required all Federal agencies to inventory their landholdings for sites eligible for listing on the National Register of Historic Places. Furthermore, this order required an inventory be made for all sites eligible for listing prior to any Federal undertaking that may impact those properties.

Although the Executive Order was signed in 1971, most Federal agencies, including the Lolo and Bitterroot National Forests, did not begin the formal compliance process until approximately 1975. This chapter will be divided into two sections. First, a discussion of those cultural resource management activities conducted by the Forest Service prior to 1975, and secondly, those activities conducted by the Lolo and Bitterroot National Forests after 1975 following implementation of a formal cultural resource management program on both Forests.

1. Cultural Resource Studies Conducted Prior to 1975

The first systematic archeological survey conducted within the Lolo/- Bitterroot National Forests was An Archeological Survey of the Magruder Corridor (Thomas and Turner 1969). This survey was sponsored under contract with Idaho State University and professor B. Robert Butler. Fieldwork and report preparation were completed in 1969. The survey focused its efforts along the Selway River and the Magruder Corridor of east-central Idaho, although some work was done in Montana adjacent to the southern Nez Perce Trail and the Nez Perce Fork of the Bitterroot River. This investigation documented over 40 prehistoric sites as

well as possible sites whose types ranged from isolated lithic material to possible pithouse villages.

The second major undertaking for archeological surveys was conducted along the main Salmon River from Northfork to Riggins, Idaho, by Richard Harrison in 1971. Harrison located over 300 prehistoric sites along the river corridor at the main Salmon River. Again, the site types ranged from isolated lithic scatters to impressive pithouse village sites.

In Montana, limited archeological research was conducted on National Forest lands by graduate students from the University of Montana, Department of Anthropology. These efforts were the initial studies for high altitude archeological studies in the area during the early 1970's. The reports, A Preliminary Report, Alpine Archeology in the Bitterroot Mountains of Montana (Fredlund and LaCombe 1971), Ninemile Area Archeological Survey (LaCombe 1972), and Archeological Data from the Montana-Idaho Stateline (LaCombe 1972), were made available to land managers on the Lolo National Forest shortly after being published. Finally, a University of Montana, Department of Anthropology graduate student researched the functions of a high altitude game trap located along the Montana-Idaho Stateline. This research resulted in an unpublished master's thesis entitled Two High Altitude Game Trap Sites in Montana (Hogan, 1974).

The United States Forest Service was making efforts to implement Executive Order 11593 at the Regional level in the early 1970's and contracted with the University of Montana, Department of Anthropology, and the Statewide Archeological Survey. In 1974, the Northern Region contracted for and later published the document Identifying and Recording Archeological Sites (Smith and Sharrock, 1974). That same year, an archeological survey was conducted within the Rock Creek drainage on the Lolo National Forest by Dr. Floyd Sharrock. This survey located and recorded over 25 prehistoric and historic sites within the Rock Creek drainage. The site types range from lithic raw material sites to extensive prehistoric occupation sites. The results of this survey are published in An Archeological and Historical Survey of Rock Creek (Keyser, et al., 1974). In 1974, the USDA Forest Service, Region One, contracted for a compilation of known sites and a ranking of each Forests' prehistoric site potential (Smith, 1974). Finally in 1975, Region One hired its first inservice professional archeologist, Dr. Floyd Sharrock, to begin implementation of a standardized cultural resource management program for the Forests within Region One.

2. Cultural Resource Management Studies Conducted on the Lolo and Bitterroot NF's Since 1975

The Lolo National Forest initiated a cultural resource management program in August 1975. Initially, the program was staffed by four temporary social science technicians who worked under the technical supervision of the newly appointed Regional Archeologist. The goals of the program were as with most beginning programs, very loose and somewhat ill defined. Between 1975 through 1977, the beginning program focused attention on cultural resource surveys for major timber sales and other ground disturbing activities on the Lolo National Forest. Summer temporaries continued to be employed, generally inventorying large blocks of ground using various types of intuitive sample survey methods. Many prehistoric as well as historic sites were located, photographed, and

Many prehistoric as well as historic sites were located, photographed, and recorded. However, very little subsurface testing or formal excavations were undertaken during this period. But the integration of cultural resources from National Forest lands into the Statewide data base was begun.

The Bitterroot National Forest began conducting cultural resource surveys on proposed projects at approximately the same time. However, the number of archeologists employed was never more than two people and usually limited to one. Nevertheless, shortly after its inception, significant sites began to be located and formally documented on the Bitterroot National Forest.

On both National Forests, records were maintained for those acreages inventoried for cultural resources. Site files were maintained on each Forest and site locational data was kept confidential. Copies of each site form were also sent to the University of Montana Statewide Archeological Survey Records and the Montana State Historic Preservation Office.

Unfortunately in those early years, little uniformity existed between Forests and sometimes not even within the same Forest, due to yearly personnel changes. For example, many sites recorded in the beginning years do not have photographs, some initial surface collections have been lost, and many early inventories were poorly documented. On the other hand, these initial growing pains for cultural resources were relatively short and improvements in field methods, site recording, and documentation improved dramatically from year to year. The following is a list of people who worked as seasonal archeologists on the Lolo and Bitterroot National Forests from inception of a cultural resource program until a formalized full-time zone archeologist position was created in 1982.

Bitterroot National Forest (Archeologists)	Lolo National Forest (Archeologists)
1975	1975
Mavis Locsheider James Keyser	C. Milo McLeod, Ryan Willett, James Beck, Larry Ford
1976	1976
James Keyser, Audrey Murray Gary McLean	C. Milo McLeod, Ryan Willett, James Beck, Larry Ford, Susan Gianettino, Sara Scott, Lucy Capehart
1977	1977
Christine Pickett	C. Milo McLeod, Ryan Willett, Larry Ford
1978	1978
Christine Pickett	C. Milo McLeod, Susan Gianettino, Ryan Willett, Elaine Howard

1979	1979
Christine Pickett/Janene Caywood	C. Milo McLeod, Elaine Howard, Lucy Capehart
1980	1980
Janene Caywood/Bruce Brooks	C. Milo McLeod, Elaine Howard, Lucy Capehart
1981	1981
Janene Caywood/Timothy Light	C. Milo McLeod, J. Michael Ryan, Kirby Matthew

The vast majority of archeological work conducted by the Forest Service since 1975 has been compliance inventories for proposed project activities. The results, methodology, and description of the project are described in numerous project reports submitted to the Montana State Historic Preservation Office and the University of Montana Department of Anthropology. Prior to 1980, the Lolo National Forest used a simple form letter to document compliance surveys. Nevertheless, field notes, site forms, and maps of the surveyed areas are available for the 1975 through 1980 time period at the Supervisor's Office, Lolo National Forest, Missoula, Montana. This information continues to be used today during the planning stages for present and future cultural resource inventories in the nearby areas.

Since 1980, a formal report replaced the sign-off sheet method for documenting cultural resource inventories and seeking Montana State Historic Preservation Office comments for projects initiated on the Lolo National Forest. These reports contrast greatly in length, descriptions, and quality. This contrast is justifiable when viewed in terms of the size of inventory, type of project, and cultural resources identified. For instance, a 1-acre placer mine inventory where no sites were identified does not receive the emphasis in report preparation as a 3500-acre timber sale in which several prehistoric and historic sites were identified (e.g., B.T.G. Timber Sale, (report No. 81,LL,3,3)). Nevertheless, each report contains the vital information for both land managers and future researchers: a brief description of the project and description by legal location, discussion of previous cultural resource work conducted within or near the project area, and a brief description of the environmental setting of the area (this section is usually very brief, as both the Lolo and Bitterroot National Forests have very accurate environmental data available). These reports also include a description of the methodology which includes the survey strategies employed, as well as the types of sites expected to be found. Finally, each report includes a section discussing the observations, conclusions, and recommendations for recorded sites, as well as a map of the project area.

The Bitterroot National Forest has always used a formal report for each cultural resource inventory conducted since 1975. Again, these reports vary in quality depending upon the size of the project and the experience of the archeologist working at the time.

it does exist. In 1976 and 1977, the Lolo National Forest conducted a systematic inventory of those portions of the Montana-Idaho State line from Hoodoo Pass to Missoula Lake. The purpose of this survey was to relocate and monitor previously recorded sites recorded by Fredlund and LaCombe in the early 1970's. No report is available, but site forms, photographs, collections, and field notes are available at the Supervisor's Office, Lolo National Forest.

Another nonproject-specific inventory was conducted in 1980 within the Scapegoat Wilderness Area, specifically along the Scapegoat plateau between Scapegoat and Flint Mountains along the Continental Divide. This survey again monitored and reevaluated previously recorded sites and located two additional sites all over 8000 feet above sea level. The Scapegoat Wilderness Area Cultural Resource Assessment is a published report documenting the results of the survey.

Presently, only two sites have been formally excavated on the Lolo National Forest. Excavations at the Whitetail site (24MO48) were conducted during the 1981 field season to mitigate the impacts of a proposed road reconstruction project. This was accomplished by the Forest's cultural resource staff with the assistance of archeologists from other Forests (Bitterroot and Flathead National Forests), as well as the University of Montana and the State Historic Preservation Office. The final report, Excavations at the Whitetail Site (24MO48), was published in 1982 and distributed within the State's archeological community and the Montana State Historic Preservation Office.

The Ruby site (24GN203) was excavated during the 1985 field season. Again, the purpose of this project was to mitigate the impacts caused by road construction for a proposed timber sale. Artifact analysis and report preparation is currently underway.

Other test excavations conducted to determine site significance have been conducted on the Lolo and Bitterroot National Forests. The results of these tests are documented within project reports such as the Lost Horse Ditch Timber Sale (Report No. 83-BR-2-1), test excavations at the Jennings Camp Creek Site (24RA154), and the more recent test excavations at the West Fork rockshelter (24RA36). Otherwise, they are documented as an addendum to the already disseminated site form such as those written for Site No. 24GN130 and the Howard Creek Site (24MO120). These addendums are distributed to the Montana State Historic Preservation Office and the University of Montana, Department of Anthropology, SITS files.

V. PREHISTORIC OVERVIEW:

A. Man Enters the New World

The date at which man entered into the new world has long intrigued archeologists. Dates ranging from 25000 to as much as 60000 years before present have been suggested. Alan Bryan, an archeologist from the University of Alberta at Edmonton, who has had a career-long fascination with this problem has noted:

> Although some workers in the field, most notably Paul S. Martin (1973), would still maintain that there is no equivocal evidence for American man earlier than the Clovis complex of the tenth millenium B.C., I sense that most conservative thinkers on the basis of the evidence reported from widely separated localities such as Piki Machay, Tlapacoya, Meadow Croft, and Old Crow, are now willing to concede that man probably entered America during a major interstadial of the last glacial (Wisconsin), perhaps 25000 years ago (Bryan 1978: 306).

Dennis Stanford of the Smithsonian Institution, another archeologist with a long-time interest on this subject, has formulated four criteria for reasonably accepting the earliest sites in the western hemisphere. These are:

1. Clearly defined stratigraphy.

2. Reliable and consistent radiocarbon dates.

3. Consonance of the data from various interdisciplinary researches.

4. Unquestionable human artifacts in indisputable association (Stanford 1982:206).

Stanford goes on to discuss various sites reported from North and South America. He suggests that a number of these finds are not human occupation sites, but represent paleontological localities such as El Bosque or maybe associated with "younger archeological complexes" such as Lewisville in Texas.

To date, no sites of extreme antiquity have been found in Montana. The closest such site, the Taber Child Site in southern Alberta, was once thought to be older than 22000 years (Reeves 1969); however, subsequent work by University of Calgary archeologists has suggested that the geologic events were much younger than the original researchers ascribed to them. This interpretation is supported by radiocarbon dates that clustered around 3000-4000 B.P. (Sask Archeological Society 1982). Given the occurrence of sites both to the north and the south of Montana, there is little doubt in our minds that sites of great antiquity will eventually be found in Montana. From within the study area itself there is less likelihood of finding early man. This is due to the geological events described earlier in this report. This hypothesis is in keeping with the area further west on the Columbia Plateau where the oldest sites date between 10000 to 12000 years ago.

We know very little about the period between 25000 to 12000 years ago, but we can probably safely say man is present, for example, at Wilson Butte Cave (ca. 15000 B.P.) in southern Idaho (Gruhn, 1965). Following this period, most archeologists "fine tuned" their interpretations by breaking down the archeological record into finer units of time.

B. Cultural Chronological Framework

A detailed cultural framework in which to place archeological materials found on both the Lolo and Bitterroot National Forests has yet to be written. This absence has led to a reliance on chronological schemes which have been developed elsewhere, i.e., at the Libby Reservoir and L.A.U.R.D. (Libby Additional Units Reregulating Dams) project areas. The importance of cultural chronologies is that they allow archeologists to place the materials which they recover in a systematic fashion. This in turn allows the archeologists to order this system to determine changing human responses through time. One problem which both Forests have is that they lie between major "cultural areas." On the other hand, this may be an advantage in that researchers must eliminate preconceived ideas about the prehistory from previously developed chronologies and subsistence strategies. Most often the study area is thought of as being marginal to the salmon areas to the west and buffalo areas to the east. It should be pointed out that no one chronological scheme may fit both Forests, or perhaps even areas within the Forests.

Currently, there are several Regional schemes used by archeologists working in the area. Principally, these are derived from areas off the Forest, often from different culture areas. Figure 9 shows the number of schemes that have been proposed by researchers working in western Montana.

Projectile points (i.e., arrowheads, dartpoints, and "thrusting spearheads") have long been isolated by the archeologists as being one of the most sensitive indicators of change. This approach has been criticized by many (Deaver 1982, Chance and Chance 1982, and McColloguh and Wilson 1982) for its lack of tight control and numerous abuses. Lahren (1976), for example, has suggested that archeologists have made projectile points representative of entire cultures, which of course they are not. However, projectile points seem to change more frequently than do other artifact types in the Northern Rockies and are most often used to indicate change. Ethnic and regional affiliations that have been assigned to particular point types will by and large be ignored, except where stressed by their authors.

Rather than use a single chronological scheme such as only Mulloy's (1952, 1958) early, middle, and late, several chronological schemes will be discussed. These are Mulloy (1952, 1958), Malouf (1956), Leonhardy and Rice (1970), Reeves (1969 and 1972), Flint (1982), and Roll (1982). We do not advocate any one of these, but rather feel that these are representative of how this question has been approached on areas within or near the Forests.

Figure 9 illustrates the time period and chronological sequences discussed in this chapter. Other chronological schemes developed for adjacent areas such as the Northern Plains (Frison, 1978), the Birch Creek Valley; Idaho (Swanson, 1972, and the Kootenai Valley; Montana (Choquette and Holstein, 1980) are shown for comparison in Figure 9. These schemes are discussed later in this document in Chapter VIII.

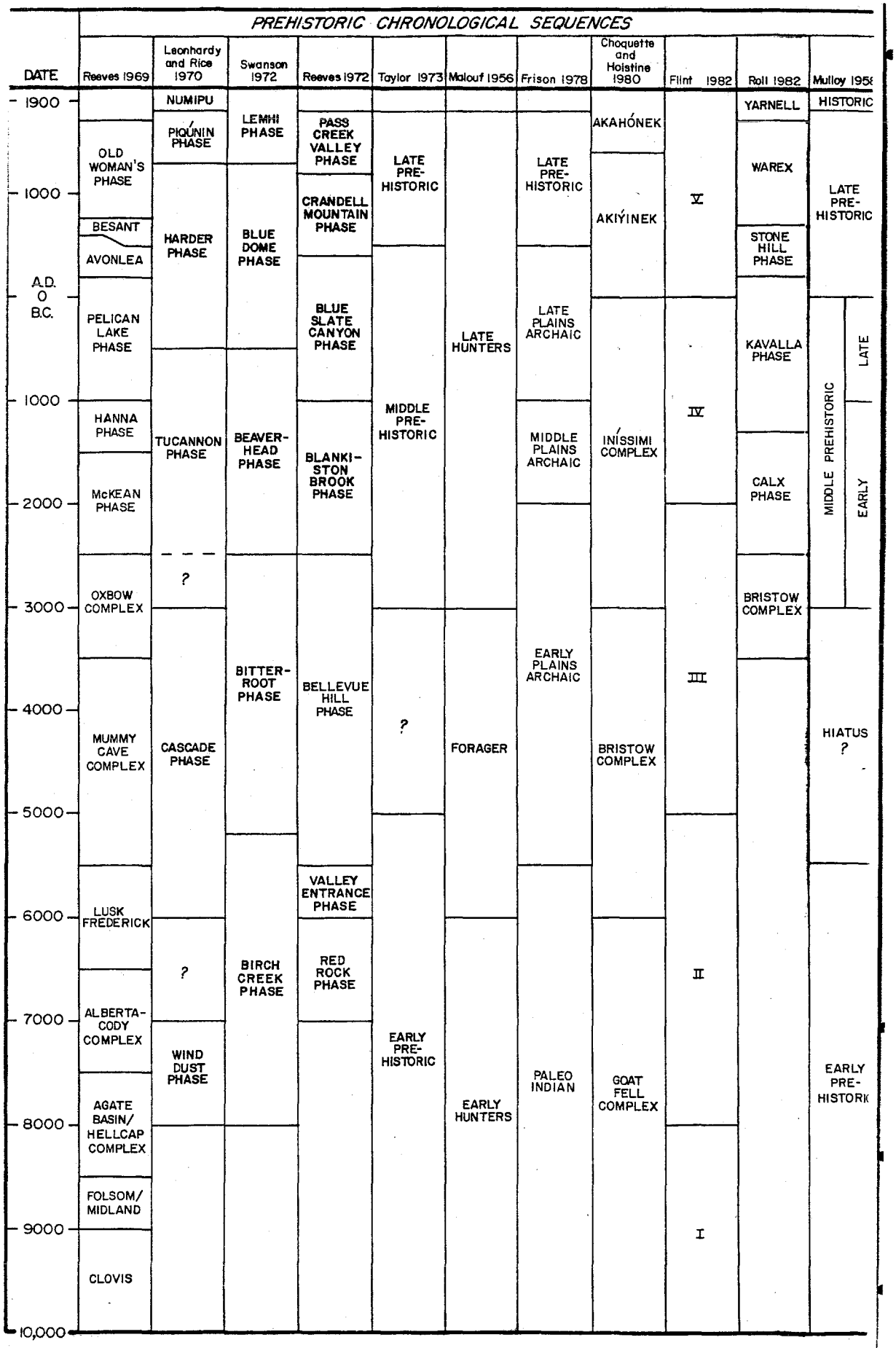


Figure 9 Cultural Chronological Schemes used in Northern Rocky Mountains.

1. Mulloy 1952, 1958

Mulloy (1952, 1958) was among the first to develop a chronological cultural scheme for the Northwest Plains. This scheme has become one of the most widely used, and according to some, the most widely abused chronological frameworks throughout the Northwestern Plains. In spite of this controversy, Mulloy's framework continues, at least on a subconscious level, to influence the manner in which archeologists working in Montana organize their data. Much of Mulloy's work was based on excavations conducted at Pictograph Cave near Billings, Montana (the term Pictograph Cave as it is used here refers to Ghost Cave and Empty Gulch, as well as Pictograph Cave itself). Mulloy compared the artifacts he had recovered from Pictograph Cave with other stratified and nonstratified sites in the Northwest Plains and adjacent areas. Because there was no way to ensure that he was making comparisons between identical temporal units, he chose to utilize projectile points as the best indicator of change. He noted:

> Uncontrolled inspection of the various sequences indicated that the most stylized and most numerous artifact, as well as that which demonstrated the greatest change through time, was the projectile point. It was readily apparent that roughly the same sequence of changes in projectile points occurred widely (Mulloy 1958:143).

Mulloy went on to note that the stylistic change was the best initial correlating mechanism for several sites. Using this method, Mulloy was able to divide his sequence into four temporal units. These are: 1) Early Middle Prehistoric Period; characterized by points with broad lateral notches and lanceolate points; 2) the Late Middle Prehistoric Period; characterized by corner-notched points; 3) the Late Prehistoric Period; and 4) the Historic Period. The latter two are characterized by triangular points with side notches or completely without notches. The separation of the latter two periods was made on the presence or absence of contact (European trade goods) material, although there is no difference in the stone projectile point styles. A fifth earlier period (Early Prehistoric) was not examined in the same detail because none of the sites examined contained any appreciable evidence of older point types such as Folsom or Yuma (Plano). Each of these periods is discussed separately below. It should be noted that after comparing the various sites, Mulloy compiled an extensive list of traits, that he believed to be either diagnostic of the period or were confined to a small number of artifacts and/or sites.

Mulloy's first period, the Early Period, notes that the groups from this period were probably among the earliest inhabitants of North America. Minus direct evidence in this report, Mulloy felt the period was important because it revealed an early manifestation of some traits which characterize later periods. Mulloy believes that campsites from this time were typically small suggesting a limited regional human population and short occupations at any given site. Evidence of dwellings is totally lacking which may indicate the use of highly perishable shelters of hide or brush. The prevailing weapon is usually thought of as the spear thrower and spear, though many of the points would have served equally well as arrow points. Faunal remains of both extinct and modern forms attest to a hunting economy from the Early Period. No human skeletal remains have been recovered in this period's sites (Mulloy 1958:208).

The Early Middle Prehistoric Period is separated from the Early Prehistoric by an unknown period of time. Mulloy suggests that the differences observed in cultural material between these two periods may reflect adaptation to changes in climatic conditions. To Mulloy, the archeological evidence suggests a shift from a big-game hunting economy to a more broad-based pattern including gathering of vegetal resources. A well-developed bone tool industry appears during this period. Information from the archeological record indicates that small bands of nomads may have roamed the region, living in caves or in perishable shelters in the open. Mulloy felt the differences in artifacts recovered from several Early Middle Period sites demonstrated different regional emphasis. He also notes that earlier archeological complexes of which he knew nothing may exist and that more information was needed before any significant statement about the origin of Early Middle Period culture could be made (Mulloy 1958:209).

Mulloy's third period, the Late Middle Prehistoric Period, exhibits little change from the preceding period. The most significant difference was the appearance of corner-notched projectile points with concave or convex bases. Another type of artifact that appears during this period is the mano or grinding stone, with one edge ground smooth. Most sites from the Middle Prehistoric are characterized by a relative scarcity of artifacts. It was suggested that the lack of artifacts may indicate shorter periods of site occupation and/or a smaller human population. In the more western sites the vegetable gathering orientation is intensified. The archeological evidence from this period indicates that the human population was divided into small nomadic bands that sometimes lived in caves but more often occupied open campsites with perishable shelters. In some localities it was noted that the economic emphasis was placed on vegetal food gathering, and large animals appear to have been little used, though they are not entirely absent. Bison trapping is first noted at this time, and the possibility that stone circles or "teepee rings" are also part of the complex is suggested by Mulloy. The economy of this period suggests a relationship between the Great Basin and the Northwest Plains, and the projectile points may represent the periphery of Plains woodland culture (Mulloy 1958:208, 213).

The fourth and fifth periods of Mulloy's scheme, the Late Prehistoric and the Historic Period, are essentially identical, the greatest difference being the presence of European trade items in Historic Period sites. Mulloy's Late Prehistoric Period is characterized by an increase in the number and size of sites and by a greater variety of artifacts in the material culture. This includes the introduction of ceramics and the first evidence of habitation sites other than in caves. Evidence suggests a return to an economic emphasis on big game hunting, particularly bison. This is thought to be due in part to an increase in the bison population. It is during the latter part of this period that tribal or ethnic differences begin to be identified, particularly among people living east of the Continental Divide.

Mulloy's chronological scheme is among the earliest proposed for the Northwest Plains. However, Mulloy cautioned his readers to be aware of its several weak points and felt that further work would produce the necessary refinements (Foor 1985:127-128). The following chronological schemes to be discussed are essentially an elaboration and refinement of Mulloy's work.

2. Malouf 1956

Malouf (1956) proposed a chronological scheme based on changing terraces heights and on projectile point typology. The latter he felt was an unsatisfactory method but the best that could be offered at the time. Malouf reverses his sequence beginning with the fourth (oldest level) to the lowest (youngest level). Almost all of this scheme is based on Malouf's work at Flathead Lake near Dayton, Montana. This is the chronological framework for Malouf's "Montana Western Region."

Malouf (1956b:241-243) begins his sequence with a stemmed shouldered point. These are barbless between 1 1/2 to 3 inches long, have slightly constricted shoulders and straight stemmed concave bases. Malouf suggests that these are equivalent to Duncan and other points found throughout the west. He notes that they are of moderate antiquity. These are almost always made of quartzite or basalt. Associated with these projectile points are simple tools such as crude knives and scrapers. Grinding stones and pestels are absent.

Malouf's third horizon was found on an old terrace located approximately 100 feet above the present level of Flathead Lake. Material included stone points, knives, and scrapers. The projectile points are unlike those of the preceeding horizon, but rather, widely corner-notched, giving the appearance of being side-notched. Knives and scrapers are of an unspecialized form. Again, quartzite and basalt are the predominant lithic raw materials.

Malouf's second horizon is also found on a terrace above Flathead Lake. This terrace is 35 feet above the present surface of the lake. Small corner-notched projectile points with straight or convex bases made of basalt and quartzite are one of the diagnostic artifacts. Also associated with this horizon are ovid knives, plan-convex scrapers, and pestles. The latter are important because of their supposed affiliation with the Columbia plateau further west. A secondary burial was also associated with this horizon. Grave goods are apparently scarce, limited to a crude scraper and two or three points; however, other types of lithics begin to appear (e.g., crude drills). Malouf saw some suggestion of contemporaneity with Plains' artifacts of the east.

Nothing definite could be said about house forms and grooved mauls. European trade goods, and pipes are lacking.

Malouf's first and youngest horizon consists of camps placed along the shores of Flathead Lake and major rivers. The upper Bitterroot Valley was particularly emphasized. Malouf (ibid.:251) saw an influx of Columbia Plateau traits just prior to the inception of this horizon (ca. A.D. 1700). There appears to be an influx of Plains traits during this time period as well. Malouf saw this as being reflected in increased amounts of flints, cherts, jasper, and obsidian. Lithics include choppers, thumbnail or end scrapers, corner-tanged implements, some pottery, and tipi rings. Malouf suggests that large camps were established at several prominent localities with smaller campsites being distributed throughout the valleys. Subsistence was on big-game animals (deer, elk, moose, mountain sheep, and caribou). This was augmented by berries, roots, stems, and the cambium layer of trees. Dwellings, although not located archeologically, were thought to be conical, mat-covered lodges. European trade goods also appear in this horizon.

3. Reeves 1969

Reeves (1969) proposed a cultural chronology for the southern Alberta Plains. This scheme is one of the most often used chronologies on the northern plains (Roll 1982:5.3) and has occasionally been used in areas west of the Continental Divide (Choquette 1971 for example). Reeves' scheme consists of a series of phases, complexes, traditions, and periods. Periods are the largest units of time followed by traditions; phases and periods appear to be roughly equivalent in lengths of time.

Reeves' first period, called the Early Prehistoric Period, dates from ca. 15000-13000 B.C. to 5500 B.C. This period is further broken down into five complexes: the Clovis complex (10000-9000 B.C.), Folsom- Midland complex (9000-8500 B.C.), Agate-Basin-Hellgap complex (8500-7500 B.C.), Alberta-Cody complex (7500-6500 B.C.), and Lusk and Frederick complexes (6500-5500 B.C.). Settlements during this period are small and located at streams and springs; caves and rock shelters were also used. Subsistence is based upon hunting, mostly bison, although mammoths were hunted during the Clovis complex. There is no indication of utilization of either aquatic resources or plants that required grinding. A variety of complex specific artifact types are present. Reeves suggests that the population density was smaller than the biomass available.

Reeves' second period, called the Middle Prehistoric Period, dates from 5500 B.C. to A.D. 200-700. Again, this period is broken down into a number of subdivisions-- complexes, traditions, and phases. These are the Mummy Cave complex (5500-3500 B.C.), Oxbow complex (3500-2500 B.C.), Tunaxa cultural tradition (2500 B.C. to A.D. 700), McKean phase (2500-1500 B.C.), Hanna phase (1500-1000 B.C.), and the Pelican Lake phase (1000 B.C. to A.D. 200). The latter portions of the Tunaxa cultural tradition belong in the next period. Again, a number of phase specific artifacts are present. Subsistence is based mostly on bison. Settlements are on terraces in sheltered creek bottoms or on prairie bluffs.

Reeves' third period, called the Late Prehistoric Period, dates from A.D. 200-1725. It is divided into a tradition and phases. This period saw the introduction of the bow. Reeves (1983:37) notes that "complexes, phases, and point types occur in profusion in this period." The major cultural tradition during this period is the Napikwan. This tradition spans the period from A.D. 200-1750, and also dates the period. Subsistence patterns are similar to the Tunaxa tradition. Ceramics occur for the first time. To account for the introduction of ceramics, Reeves suggests a physical expansion of eastern woodland people in the area. This is seen particularly at such sites as the Cluny earth lodge village site in Alberta (Forbis 1978).

4. Leonhardy and Rice 1970

Leonhardy and Rice (1970) have proposed a detailed scheme consisting of six phases for the lower Snake River. This sequence has been extended up the Clearwater River (Ames 1980, and Benson, et al., 1979) and other portions of northern Idaho (Hudson, et al., 1979). The earlier portions of this scheme may extend into the areas discussed in this overview (Choquette 1982, and McLeod 1984).

Their first proposed phase is the Windust Phase. This dates between 11000 to 7000 B.P. The diagnostic projectile point is described as having a relatively short blade, shoulders of varying prominence, principally straight or contracting stems, and a straight or slightly concave base. Although rare bifacial and unifacial lanceolate points occur along with crude knives and poorly made scrapers, utilized flakes are, however, the most common artifact, although a few bone artifacts also occur. Lithic reduction strategies include the production of tabular flakes and prismatic blades with the latter being produced from polyhedral cores. Cryptocrystalline silicates (chert, agate, flint, etc.) and fine textured basalt were the preferred raw materials. Little can be said about the settlement pattern. Animals exploited include elk, deer, pronghorn antelope, rabbits, beaver, and river mussels. No tools associated with plant processing are known to occur during the early portions of this phase; however, manos (hand held grinding stones) do occur during the latter portions. Cremation burials are known from this phase at the Marmes rockshelter. The characteristic projectile point from this phase has been identified in western Montana by several researchers (Choquette 1982, and Melton 1984).

The second phase of this scheme, called the Cascade Phase, dates from 7000 to 5000 B.P., with Leonhardy adding an additional 500 years (Leonhardy, 1975). This phase is divided into two distinct subphases based on the presence or absence of the cold springs, side-notched point. Diagnostic projectile points include the lanceolate, bipointed Cascade, and the Cold Springs, side-notched. Other tools include large, generally well-made knives, tabular and keeled endscrapers, and utilized flakes. A variety of ground stone is also present including manos which are small grinding stones and edge ground cobbles. Bone tools are also present. Lithic reduction strategies appear to be geared toward the production of large tabular flakes and prismatic blades. Raw material is predominated by fine, textured basalt, although cryptocrystalline material also occurs. Elk, deer, antelope, rabbit, beaver, and riverine resources were the subsistence base. Salmon represent a new resource exploited during this phase. However, specialized fishing techniques do not appear to have been developed until later. Plant utilization is evidenced by grinding stones and manos. Although cascade projectile points are known from Montana, they appear to date toward the latter part of this phase (Melton 1984). Although the eruption of Mt. Mazama occurs during this time period, it apparently had little effect on cultural systems at this time period; however, the side-notched projectile point appears for the first time. The relationship between the two events is probably fortuitous rather than the result of any cultural development.

The third phase, called Tucanon, dates from 5000-2500 B.P. Two types of diagnostic projectile points are present. One form has a short blade, shoulders of varying prominence, and a contracting stem. The second is notched low on the

side or at the corner to produce an expanding stem and short barbs similar to the Snake River corner- notched type. Other lithics include small scrapers, scraper-like cobble implements, utilized cobble spalls, and pounding stones. Ground stones include net sinkers, hopper mortar bases, and pestles. Knives appear to be absent. A number of types of bone tools are also present, several of which may indicate net making. Lithics are predominantly of poorly made basalt primary flakes. Overall, the technological pattern seems cruder than previous and succeeding phases. Exploited fauna includes deer, elk, antelope, mountain sheep, and small mammals such as rabbits. River mussels become important, although salmon are still exploited.

The fourth phase, called the Harder Phase, dates from 2500 B.P. to 600 B.P. There are two distinct subphases separated by differing settlement types. Diagnostic projectile points include the Snake River corner- notched type and a large basally-notched point which is rare. Other tools include a variety of small-end scrapers, some of which are shouldered, lanceolate and pentagonal knives, utilized spalls, pestles, hoppers, motar bases, and sinkers. Bone artifacts include awls, needles, circular and pendant beads, perforated elk teeth, and incised gaming pieces. No information is presented on reduction strategies or raw material preferences. Pit house villages are thought to develop during this phase; however, pit houses are known to date slightly earlier than this period (Ames and Marshall 1980). Animals exploited include bison, antelope, elk, deer, mountain sheep, and small mammals such as dogs. Small mammal remains are abundant. Food plants were used, and salmon also appear to be heavily utilized.

The fifth phase, called the Piqunin Phase, dates between 1300 A.D. and 1700 A.D. Diagnostic projectile points are the Columbia Valley corner-notched and Wallula rectangular stemmed types. Other flaked tools include specialized wood working tools, lanceolate and pentagonal knives, small-end scrapers, and a variety of cobble implements. Bone artifacts including composite harpoons are also present. Twinned basketry is also known from this phase. No information is presented on lithics or raw material. Elk, deer, and salmon are the main subsistence items recovered. Pit house villages appear to have been the principal settlement type.

The final phase is called the Numipu Phase. This phase is a putative phase and dates from 1700 A.D. to 1900 A.D. It is characterized by the presence of Europeon trade goods. This phase, which correlates with the historic Nez Perce settlement pattern, is described in the ethnographic sections of this report.

5. Reeves 1972

Reeves' (1972 and 1975) work is derived from a major program of survey and excavation in Waterton Lakes National Park in Alberta, Canada. Reeves' study is one of the few large-scale programs conducted within the Rocky Mountains. He divides his materials into six integrated subphases and three complexes. These divisions are based on the study of differential temporal frequencies of artifact types, and comparisons across components on the basis of relative statigraphic position, artifact content, and absolute dating methods. The six subphases are Red Rock Canyon, Valley Entrance, Bellevue Hill, Blakiston Brook, Blue Slate Canyon, Crandell Mountain, and Pass Creek Valley. The three complexes are Besant, Waterton River, and Historic Aboriginal.

Reeves (1972:100-101) defines the Red Rock Canyon subphase as lasting between 7000 and 6000 B.C. Diagnostic projectile points include Agate Basin, Lusk, and Scotsbluff. A variety of other lithic types are present. Lithic reduction strategies include production of prismatic blades from undirectional cores via hard hammer percussion (perhaps using edge ground cobble hammerstone) and production of parallel to expanding triangular flakes via hard hammer percussion. Lithic material is both cryptocrystalline and microcrystalline. Since there is only one site assignable to this phase, not much can be said about either the internal settlement or land/resource utilization patterns. The climate appears to have been cooler with increased precipitation.

Reeves' (1972:101-102) next subphase, the Valley Entrance Phase, appears to be rather tenuous. Again, this is based on material from a single site. About the only thing that definitely can be said about this phase is that the diagnostic projectile point is the Lusk type. Others aspects of this subphase may relate to subsequent subphases. This phase dates between 6000 and 5500 B.C.

Reeves' (1972:102-104) third subphase, called Bellevue Hill, dates from 5500 to 1500 B.C. Diagnostic projectile points include Oxbow, McKean, Besant, Pelican lake corner-notched, and locally named projectile points. A variety of lithic tools are also present. Lithic technology consists of parallel sided or expanding triangular flakes with faceted or unfaceted platforms struck from polymorphic, acute angle bifacial block cores. Lithic material includes Avon chert, yellow dendritic chert, and a brown chert that appears to be phase specific. Blue chert and obsidian appear infrequently. Microcrystalline material appears to relate to Grinnell Technology Technological System. Land resource patterns appear to show seasonal use of uplands during the summer and use of sheltered lowlands during the winter. Bison and sheep are exploited. The climate during this subphase varies between drier and moister with the onset of the altithermal and neoglaciation. Climate eventually becomes essentially modern toward the end of this phase.

Reeves' (1972:104-105) Blakiston Brook Subphase lasts between 1500 to 1000 B.C. Diagnostic projectile points include Hanna stemmed and Hanna corner-notched. Again, since only one site is included in this phase, little is known about lifeways. A variety of lithic tools are present, and Avon chert is the most frequent raw material type.

Reeves' (1972:106-108) Blue Slate Canyon Subphase dates from 1000 B.C. to A.D. 400. This subphase may extend into Montana (Reeves 1970 and 1983). Diagnostic projectile points include Pelican lake, Hanna corner-notched, and "Nubin

Stemmed." A variety of lithic tool types are present. The lithic technology uses a variety of cores and reduction strategies. A variety of lithic raw materials were used, however, Avon chert is extensively used. There is some suggestion that higher life zones were exploited during this period, although this may not have happened in cirque basins during portions of this phase. The climate seems to fluctuate slightly, but remains essentially modern.

His Crandell Mountain Subphase dates from A.D. 400 to A.D. 1200. Diagnostic projectile points include Avonlea triangular, Plains, Prairie side-notched, and Columbia Valley corner-notched. A variety of lithic and bone tools are present. Ceramics are absent in this sample. Lithic technology consists of a variety of lamellar flakes struck from undirectional 90° angle, conical, blade-like cores that are reduced to small size. Lithics utilized include a distinctive group of blue cherts and chalcedonics and a translucent gray chalcedony. Other raw material includes Knife River Flint, Avon Chert, obsidian, and black chert, all of which are uncommon. Land resource patterns show communal bison drives in the lower valley and summer use of alpine areas. The climate during this period shows low level fluctuations possibly due to the onset of neoglaciation.

Reeves' Pass Creek Valley subphase dates between A.D. 1200 to A.D. 1800. Diagnostic projectile points include Plains triangular, Plains side-notched, Catan, and Prairie side- notched. A variety of other lithic tools are also present. Ceramics (cord and checked stamped) are also present. Lithic reduction strategies are described as Rundle Technology. This is the use of small chert pebbles and production of microlithic flakes. Other types of flakes are also known. Raw material is mostly a variety of cryptocrystalline silicates, although Avon chert appear less emphasized as a preferred raw material. Land/resource patterns appear to be related to the prehistoric pattern of fall/early winter, late winter/early spring, kill/camps, spring to fall transitory hunting camps, and summer alpine hunting camps. Bison, deer, and sheep were the animals exploited. Climate during this subphase is essentially modern.

Reeves' final phase or complex, called the Aboriginal Historic Complex, dates from A.D. 1840-1870, and is distinguished by the inclusion of items of European origin. The land resource pattern consists of small transitory occupations. The collapse of traditional native subsistence and settlement patterns occurs during this interval.

6. Flint 1982

Flint (1982) names the Northern Rocky Mountain Region archeological area, which she sees as a culture area distinct from either the Great Basin, Columbia Plateau, or Northwestern Plains. She divides her sequence into five periods numbered I through V. The distinction between periods is based on C-14 dates, projectile point styles, and climatic data (ibid.:168). The problems arising from this approach are discussed in Stratified Area II.

Flint's first period (I) dates from 12500 to 8000 B.C. Diagnostic projectile points include Clovis and Folsom. The predominant technology was spear thrusting. The climate is probably cold with glacial ice receding at 9050 B.C.

Flint's second period (II) dates from 8000 to 5000 B.C. Diagnostic projectile points include Cascade, Lovell Constricted, Pryor Stemmed, Birch Creek, Alberta, and Scottsbluff. Again, the predominant technology appeared to be spear thrusting. The climate was again cooler than today.

Flint's third period (III) dates from 5000 to 2000 B.C. Diagnostic projectile points include Bitterroot and Salmon River side-notched, stemmed-indented base, "earred-indented" base (Oxbow, Elko-earred), and lanceolate-indented base (McKean lanceolate). Notched darts are the primary technological system. The climate alternates between hot and dry and moister periods.

Flint's fourth period (IV) dates from 2000 B.C to A.D. 0. Diagnostic projectile points include Hanna Stemmed, Northern Rocky Mountain fish tail, Pelican Lake variants, and Northern Rocky Mountain convex based corner-notched. The predominant technological system is the atlatal or spear thrower and dart. The climate is more or less modern.

Flint's fifth period (V) begins at A.D. 0. Diagnostic projectile points include Blue Dome side-notched, Besant variants, Samantha side-notched, Mummy Cave corner-notched, Desert side-notched, and fine triangular. The bow and arrow replaces the atlatal and dart as the predominant technology during this period. The climate is modern.

7. Roll 1982

Roll (1982) has prepared a cultural chronological sequence based on his work in the Libby area. His model is somewhat more carefully thought out and his rationale explained in greater detail than many of the previous models. Roll (ibid.:5.7--5.9) sees this model as an expression of prehistoric responses to locally available resources. Additionally, he felt that there were serious problems with a previously developed local chronology for the area (Choquette and Holstine 1980). Roll's chronological scheme is based on integration of projectile point typology, radiocarbon dating, and cross dating from adjacent areas. Additionally, both geologic events and palynology are brought into the sequence. Six phases are present in this sequence. Although Roll feels that early materials are present, he starts his sequence with what he thinks are the most reliable and consistently datable sites.

Roll's first period is called the Bristow Phase. He dates it between 3500 and 2500 B.C. Two types of diagnostic projectile points are present: 1) "reminiscent" of the Plains' "Oxbow" type; and 2) unnamed types that are described as being crude, near lanceolate shaped without grinding, and having straight bases. There is some question as to whether the latter type should be included in this phase or in a later phase. Roll sees this as a puntative phase because of the lack of sites and materials assignable to it. Most of the particulars of this phase remain to be determined.

Roll's second phase is called the Calx Phase. It dates from 2500 to 1500 B.C. Diagnostic projectile points mostly resemble the McKean lanceolate, Duncan, and Hanna types. The number of sites known for this phase increases dramatically over previous phases. Roll suggests that this might be due to abated erosional cycles or groups in the process of acclimating themselves. There is the possibility of two distinct subphases in this period. Roll feels that this period might date slightly later than the counterpart projectile points on the plains. At best, he suggests that this phase should be seen as limited expression of a cultural system. Again, this is based on the lack of cultural materials, which if present, would give greater insight to cultural responses during this period.

Roll's third phase, called the Kavalla Phase, dates from 1000 B.C. to A.D. 200. The diagnostic projectile points appear to relate to the Pelican Lake Phase of the plains (ca. 1000 B.C. to A.D. 200) or the Harder Phase (ca. 500 B.C. to A.D. 1300) (Leonhardy and Rice, 1970) further west. These are large corner-notched projectile points of which there are three variants. One other artifact type that might also be diagnostic is the notched pebble. This artifact type is generally thought to be associated with fishing. It is during this phase that full-scale utilization of the area, equivalent to later occupations, begins.

Roll's fourth phase is called the Stonehill Phase. This phase dates from A.D. 200 to 700. Roll sees this as a "default culture type" (i.e., he is unsure of the temporal position of artifacts as well as the associations between various point types). Diagnostic projectile points are heterogeneous and rather crude. Roll sees the closest analogue as being the Besant type found on the plains to the east. This may be an elaboration of the preceding Kavalla Phase or perhaps may even be earlier cultural manifestation. The major difference from other phases at this time appears to be variation in projectile point morphology.

Roll's fifth phase, called the Warex Phase, dates from A.D. 700 to 1200. During this phase, the true bow and arrow came into the area. The diagnostic projectile point is the Avonlea point. Climate appears to have attained essentially modern status during this phase. Roll suggests that this phase may date later in Montana than generally thought. Although Roll does not discuss settlement and subsistence, they were probably similar to the preceding two phases.

Roll's sixth phase, called the Yarnell Phase, dates from ca. A.D. 1000-1200 to A.D. 1700-1800, and is the final expression of the prehistoric era in the Kootenai Region. Diagnostic projectile points are side-notched arrow points. These projectile point forms are widely distributed throughout the west at this time, but may date slightly later in the intermountain west. Again, Roll does not describe either settlement or subsistence patterns, which most likely resemble those begun in the Kavalla Phase and continue through to this phase.

C. Summary

The following cultural chronologies all show artifact changes through time. Although possessing different names, projectile points change little over time. As we noted at the beginning of this chapter, we do not as of yet have a detailed cultural sequence of western- central Montana. Any one or none of these schemes may be applicable to the areas covered by the Lolo and Bitterroot National Forests. Perhaps the safest thing to say at this juncture in time is that more work needs to be done in the immediate vicinity before a localized sequence can be developed.

Recently, one consulting firm "ethnoscience", reviewing the archeological research that has been conducted in western Montana, has suggested that cultural chronologies fall into two paradigms (Deaver, 1984). These two are external influence and "insitu development." These both need to be discussed separately. In a few cases, the two paradigms are combined which generally results in a mish-mash of confusing terms and ideas.

Malouf (1956) is an example of the outside influence paradigm. In fact, he sees this as an integral part of his suggested chronology, particularly the later portions. This paradigm sees artifacts as entering from and relating to other geographical areas (in this case, the Plains, the Columbia Plateau, and the Great Basin).

Roll (1982) and Flint (1982) are examples of "insitu development" at both the local (Roll) and regional (Flint) level. Following earlier work by Earl Swanson (1966), this paradigm relies heavily on ideas and concepts borrowed from ecology. A caveat necessary here is that many of ecological concepts are abused or modified in such a way that they do not resemble the original concept. More importantly, they become ingrained into the literature in this modified form. They (Deaver, 1984) suggest that the two paradigms are asking different questions of the same data. This perhaps is the best way to approach cultural chronologies, i.e., have a specific question in mind rather than on a strictly typological basis. Figure 9 illustrates and compares the cultural chronologies and their approximate time periods previously discussed.

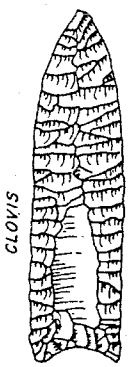
D. Prehistoric and Early Historic Life Ways

As noted, no chronological schemes apply directly to the area covered by both Forests. However, it proves useful to place previously recorded sites in some sort of chronological framework. This is done by using projectile point chronology with the full awareness that this in, and of, itself may not be the best way to approach this question. Modifying Reeves' (1969) and Frison's (1978) chronological schemes. There are three major periods: Early (10000 B.C. to 5500 B.C.), Middle (5500 B.C. - A.D. 500), and Late (A.D. 500-1700). Each of these periods is further refined into a number of traditions, phases, and complexes. The reader is referred to Reeves (1983) and Willey and Phillips (1958) for a discussion of the "archeological meaning" of these terms. Each of these periods are discussed separately below.

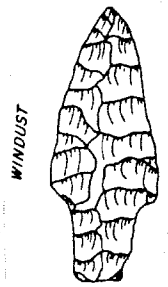
1. Early Prehistoric (10000-5500 B.C.)

This period is characterized by the use of large lanceolate projectile points used to kill various types of megafauna, such as those described in Chapter III. This period is often broken down into three projectile point traditions: 1) Llano; 2) Folsom; and 3) Plano. Archeological manifestations that relate to cultural complexes further west dating from this time period are also present.

a. Llano

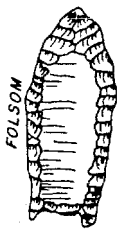


The Llano tradition is distinguished by the presence of large, lanceolate fluted points called Clovis (Figure 10a). These are often associated with mammoth remains. Clovis points are currently the oldest known cultural manifestations in Montana. They have been dated at ca. 11000 B.P. at the Indian Creek site near Townsend, Montana (Davis, 1984). Clovis points have yet to be found in any documentable context west of the Continental Divide. One possible fluted point was found at 24MO25. Sharrock (n.d.) was unable to assign the point to any known point complex, but was not able to rule out the possibility of the point being a small crude Clovis point.



Concomitant with Clovis points are materials assignable to the Wind Dust phase (Figure 10a) (Rice, 1972). The Hatwai site contained a Wind Dust component that dated to 10000 B.P. (Ames, 1980). Surface indications in the Kootenai River drainage (Choquette, 1982) and possibly the Clark Fork (Choquette and Holstine, 1982) suggest that this point type is present in western Montana. There is little evidence to assume that sites yielding this point type are not of similar age.

b. Folsom

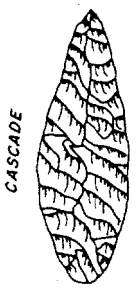


Folsom points are again a lanceolate fluted point. They are generally smaller, more skillfully manufactured, and possess a larger flute in proportion to their body size than Clovis points (Figure 10a). Folsom points are generally associated with the remains of extinct forms of bison, although utilization of other types of animals is also known (Johnson, 1977). Folsom points have yet to be identified west of the Continental Divide in Montana. However, their presence just east of the divide at the MacHaffie site (Forbis and Sperry, 1952, Forbis, 1955) would suggest that their presence should not be unexpected. Folsom points have been found west of the Continental Divide in the upper Snake and Salmon country and near Boise Idaho (Butler, 1978).

c. Plano

The Plano tradition contains a number of named projectile point types. These are usually large, well made, generally lanceolate in outline, with some types being shouldered (Figure 10a). Both modern and extinct animals are known from sites with Plano materials. Types found on or near the Forest include Agate Basin, Cascade, and possibly Frederick, Lusk, Alberta, and Plainview.

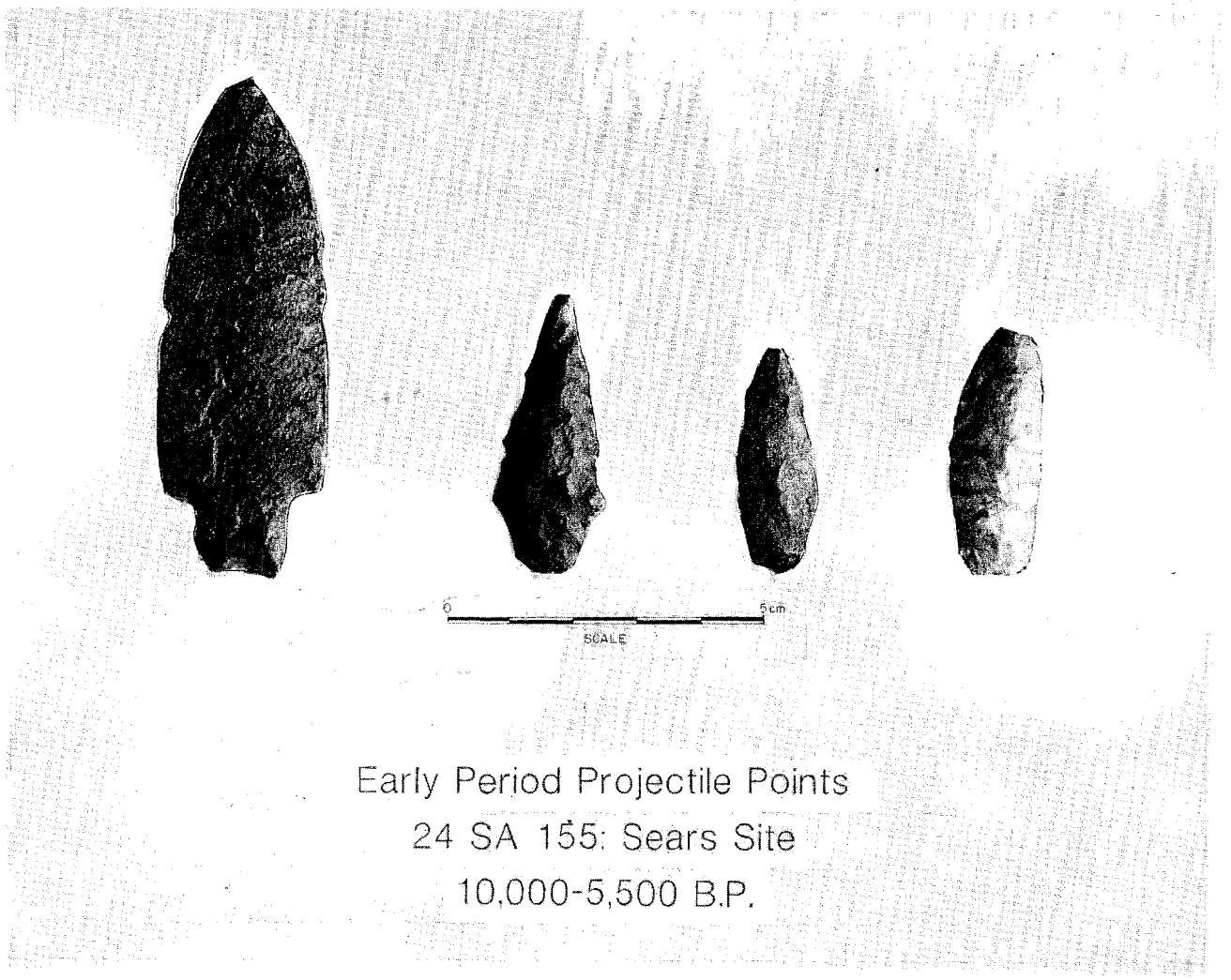
Agate Basin is the most frequently identified paleo- point type in western Montana. They have yet to be found in association with datable materials. The dates from the Avon site are not directly associated with Agate Basin points. Agate Basin points have been found at the Avon site along Nevada Creek, at the mouth of the Clearwater River, possibly on the Libby Reservoir, at MacDonald Lake, Rattler Gulch, Lake Como, and the upper Rock Creek drainage.



Cascade points are the second most frequently identified, possibly paleo-point types, in Montana. These points have been found beneath the Mazama ash layer (dated at ca. 6700 B.P.) in the Libby area (Choquette and Holstine, 1980). Cascade points are also known from the Clark Fork Valley, MacDonald Lake, and northwest Montana. Melton (1984) has noted that this point type tends to associate with later projectile point types and may date slightly later than their western counterparts.

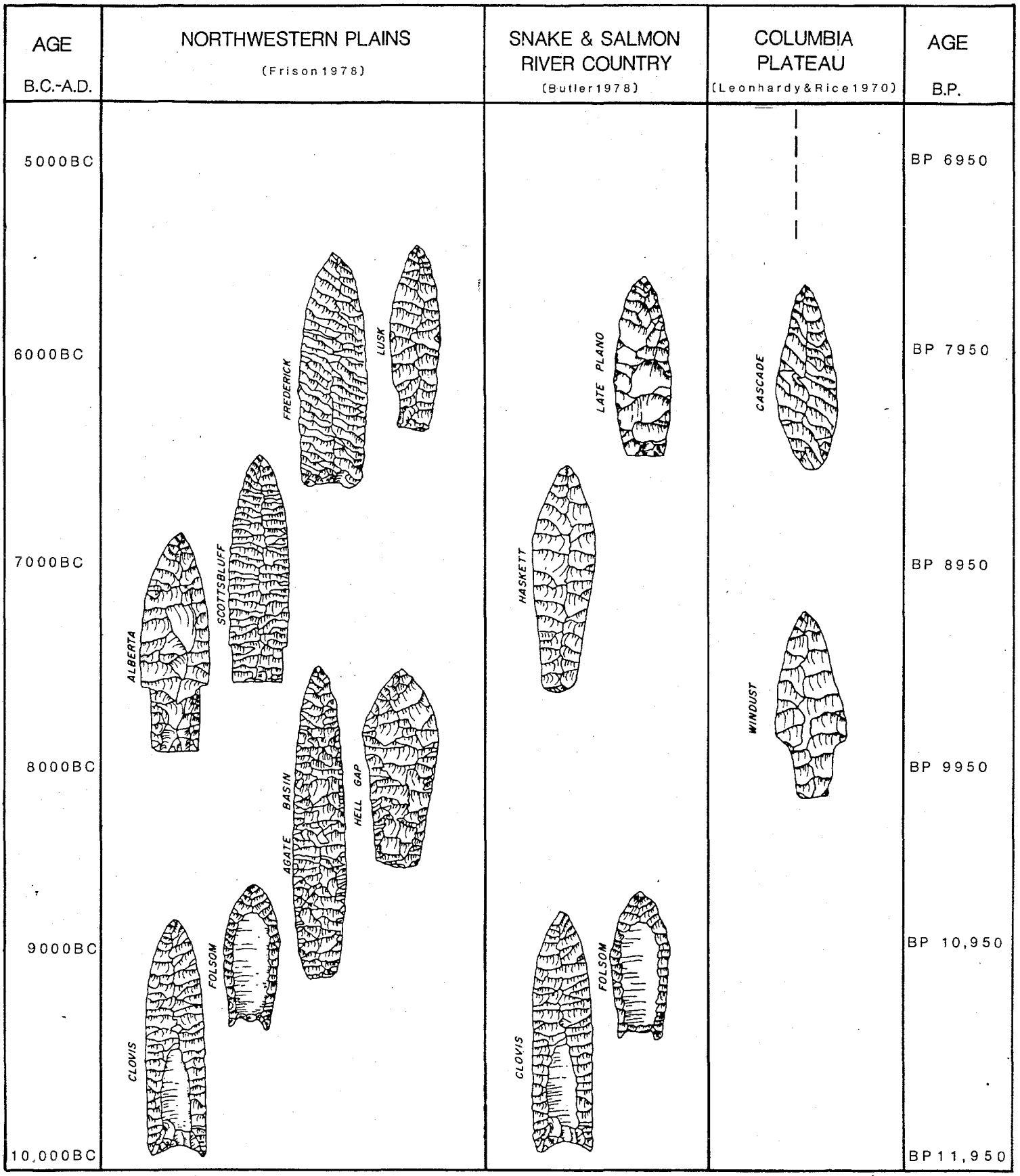
Other early point types are known from private collections (Choquette and Holstine, 1980, and Scott, 1981). They, however, are mostly surface finds. Portions of the study area may have also served as raw material sources for early hunters. Forbis (1968:3) for example suggests that several Alberta points from the Fletcher site in Alberta are made from a welded tuff that came from 12 miles northwest of Missoula. Tro and Tro (1968) illustrate the midsection of a projectile point that may date from this time period (Choquette and Holstine, 1982). Cameron (1984) suggests that early prehistoric materials were also found at the Avon quarry site. Additionally, early prehistoric materials appear to be made of Pine Creek shale. (See photo No. 7.)

This period ends with the presence of essentially modern fauna, the possibility of warmer and drier climate, and the occurrence of large side- and corner-notched projectile points. Figure 10a shows the comparative types and styles of projectile points that date from the Early Period in the various cultural regions previously discussed.



Photograph No. 1

Early Period Projectile Points
24SA155:Sear's Collection
10000-5500 B.C.



Early Prehistoric period projectile points

FIGURE 10A

2. Middle Period (5500 B.C. - A.D. 500)

The middle period is characterized by the presence of large side- and corner-notched projectile points. There is a variety of named projectile point types. These are often placed in complexes based on similarities. This period is often broken down into three subperiods. These are: 1) early; 2) middle; and 3) late.

a. Early Middle Period (5500-2500 B.C.)

Much of this subperiod falls within what is referred to as the altithermal. This is a continent-wide drying trend (Antevs, 1955) that has been seen as having a tremendous effect on human populations (Hurt, 1966, Buchner, 1980, and Benedict, 1981). Others have argued against this, suggesting the lack of sites represents an archeological fallacy rather than an actual lack of sites (Reeves, 1973). Benedict (1979) has suggested that the Rocky Mountains became more heavily exploited at this time. If this were the case, the site density should be higher than expected, particularly in some of the higher mountain valleys. This cannot be demonstrated for western Montana at this time.

Projectile point types from this subperiod include mummy cave side-notched, Bitterroot and Salmon River side-notched, Oxbow, and possibly Mount Albion complex type points. Although with the latter point type, later chronological placement is a distinct possibility. All of the above mentioned types are known from areas on or adjacent to both Forests.

There are relatively few sites dating from this period. Mummy cave and Salmon River materials have only been identified at the Graybeal site (Flint, 1982). Possible Mount Albion materials are known from 24LC401-403 (McLeod, 1980), the Blackfoot River (Jelks, n.d.), and possibly 24RA34 (Fredlund, 1979). Placement of points into this type, however, is tentative at best. Oxbow points are known from the Clark Fork Valley, northwestern Montana, the Blackfoot River, the Avon site, and the Flint Creek Valley (Melton, 1983). Oxbow points have been dated at 5200 B.P. at the Sun River site, 24CA74, (HRA 1984). This suggests that oxbow materials were found to have existed slightly earlier in Montana than areas further east and north.

A number of authors have suggested that the exploitable resource base is expanded, including a greater variety of plant and small animals perhaps as a response to changing environments. Conversely, there is no evidence for some groups such as those using oxbow points for large communal kills. This may be the result of inadequate samples rather than the lack of communal hunting.

b. Middle Middle Period (2500-1500 B.C.)

The middle middle period is characterized by the presence of projectile points that are generally assigned to the McKean complex. These include Duncan, Hanna, (Wheeler, 1954), McKean lanceolate (Wheeler, 1952), Mallory side-notched (Forbis, et al., n.d.), and possibly Yonkee (Bentzen, 1962). The latter two types have yet to be identified from western Montana. Some authors (Malouf, 1956b, Johnson, 1971, and Ward, 1973) have suggested that these projectile points are the earliest type of projectile points found in western Montana. Even if these are not the earliest typological indicator, they are numerically more common in collections than projectile points from earlier periods.

There is some suggestion of increased use of high altitude areas during this time. This is generally evidenced by large numbers of McKean complex artifacts being located (Fredlund, 1970, Fredlund and Lacombe, 1971, and Fredlund and Fredlund, 1971). However, processes of soil formation, erosion, rodent disturbance, and historic artifact collecting all need to be assessed in much greater detail before this hypothesis can be evaluated.

Taylor (1973:114) noted that artifacts generally assigned to this period are more crudely produced and less symmetrical than their eastern counterparts. Malouf (1956) suggested that these projectile points may date slightly later than those found further east. A datable site needs to be excavated in order for both of these suggestions to be evaluated.

c. Late Middle Period

The late middle period begins with the introduction of large corner-notched dart points into western Montana. This type of projectile point has been given a variety of names; however, for the sake of convenience, the term Pelican Lake is used. The variant of Pelican Lake points used in this area is placed in the Blue Slate Canyon subphase (Reeves, 1983), although this placement has been questioned by some (Fredlund, 1979). Foor (1982) has pointed out that there is no evidence to suggest that the Pelican Lake phase ends later in this area than other areas.

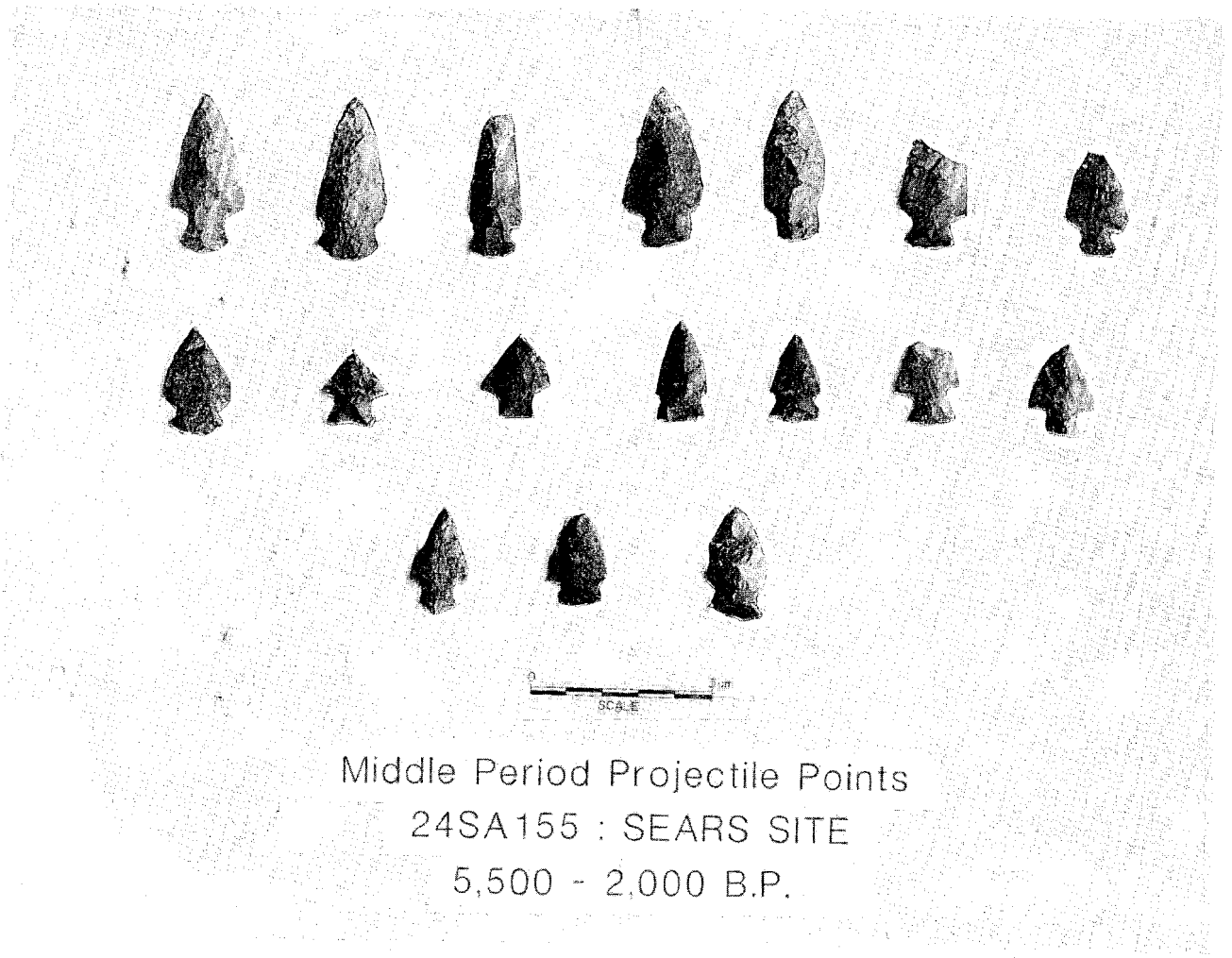
Pelican Lake points have been excavated at 24RA34 and in the Libby area. Excavation of these sites has shown that this is the beginning of intensive use of the area.

Corner-notched points attributed to this type are numerically the most commonly identified projectile points in Montana (Melton, 1984).

Besant points are final point types belonging to the late middle subperiod. The point type itself is relatively rare in western Montana. It has been identified at the Graybeal site (Flint, 1980), Avon (Reeves, 1983), northwestern Montana (Taylor, 1973, and Roll, 1982), and possibly on the Middle Clark Fork (Ryan, 1977).

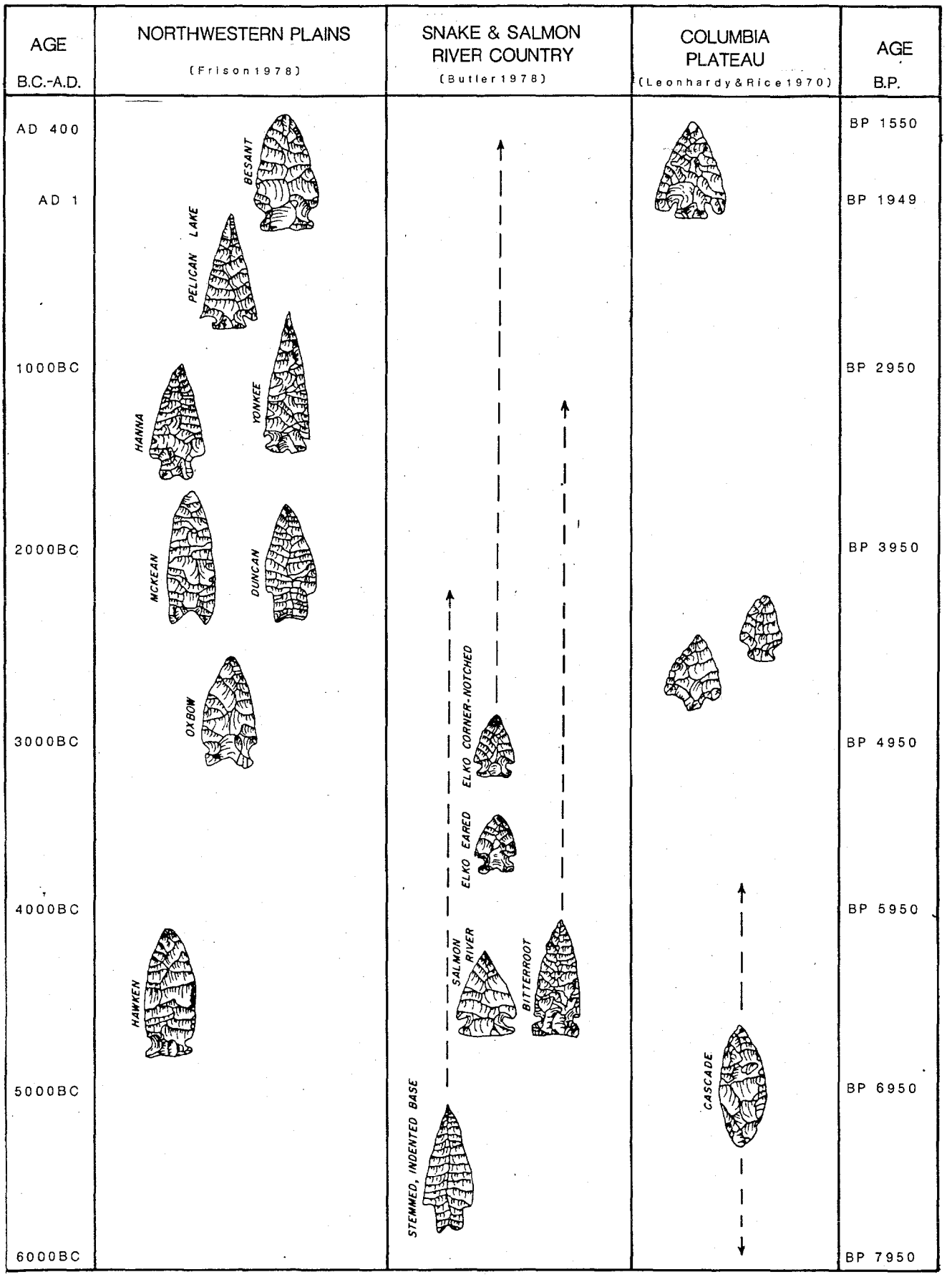
Roll sees Besant as a temporal analogue rather than the actual point type itself. Perry (1980) has suggested that Besant points may be attributable to southward moving Athabascans, this remains to be demonstrated. Although Besant peoples possessed pottery, it has not yet been reported from western Montana.

This period ends with the introduction of the true arrow point into western Montana. Figure 10b illustrates the several types of projectile points that date from the Middle Period.



Photograph No. 2

Middle Period Projectile Points
24SA155:Sears Site
5500-1500 B.C.



Middle Prehistoric period projectile points

FIGURE 10B

3. Late Prehistoric Period (A.D. 500-1700)

The late prehistoric period begins with the introduction of Avonlea points into Montana. Avonlea points are generally held to represent the introduction of the bow into the area. This, however, occurs later in Montana than elsewhere. These points date from A.D. 350 in southeastern Montana (Fredlund, 1981) and roughly A.D. 1000 in northwestern Montana (Roll, 1982). Kehoe and McCorquodale (1961) have suggested that Avonlea may represent another group of Athabascans moving south. Gordon (1979) points out that there are several fallacies with this hypothesis.

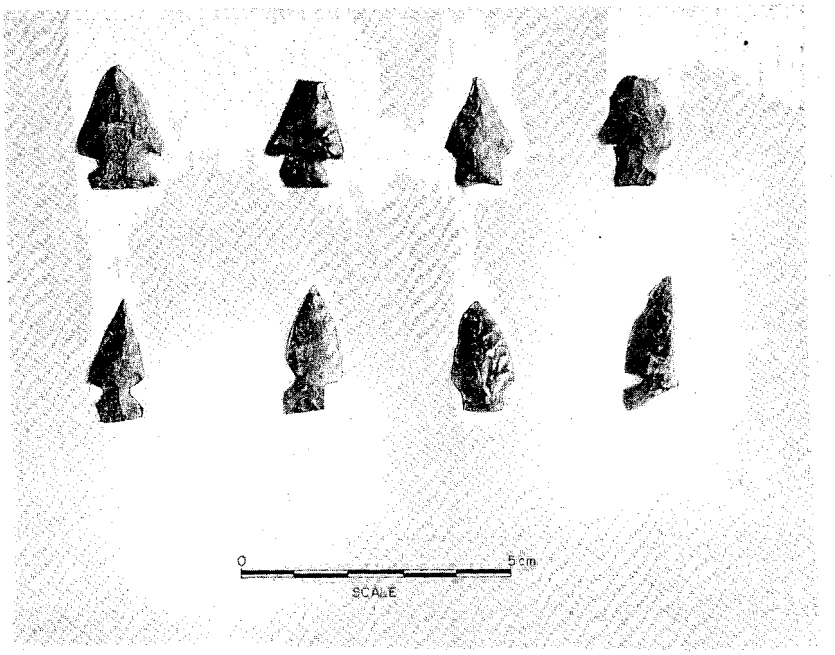
One fallacy is that Avonlea projectile point types do not extend as far south as the area currently occupied by Athabascans, i.e., the Navajo areas in New Mexico and Arizona. Also, the point style varies considerably between its northern and southern distribution areas. This is a sound argument against the "wave theory" or hoards of Athabascan speaking people moving south from the Boreal Forest in Canada to the American southwest for the spread of this artifact type. Finally, there are very late dates associated with Avonlea (Avonlea-like?) projectile points in the northern United States which suggests a lack of migration of great length. This data suggests the idea for Avonlea (arrow points) was diffused between groups rather than an actual migrations of peoples.

Avonlea points have been identified in the Middle Clark Fork Valley (Ryan, 1977), MacDonald Lake (Barnier, 1971), the Flathead River (Fredlund and Fredlund, 1971), the Avon quarry site (Johnson, 1970), northwestern Montana (Choquette and Holstine, 1980, Hudson, et al., 1980, and Roll, 1982), and Placid Lake.

Following Avonlea, a variety of small side-notched projectile points appear. These are often times associated with various ethnic groups. Also present are corner-notched arrow points that show greater affinities to projectile point types further west. Projectile point types from this period include Plains, Prairie, and Desert side-notched, and Blue Dome, Beaverhead, and Columbia Valley corner-notched (Figure 10c). These have recently been dated at A.D. 1190 ± 135 (Beta, 4950) ct. Flathead Lake (L. Davis personal communication). A single projectile point dating from this time period was found at the White Tail site (24MO48) (Ryan and McLeod, 1982). This site was thought to represent a winter occupation.

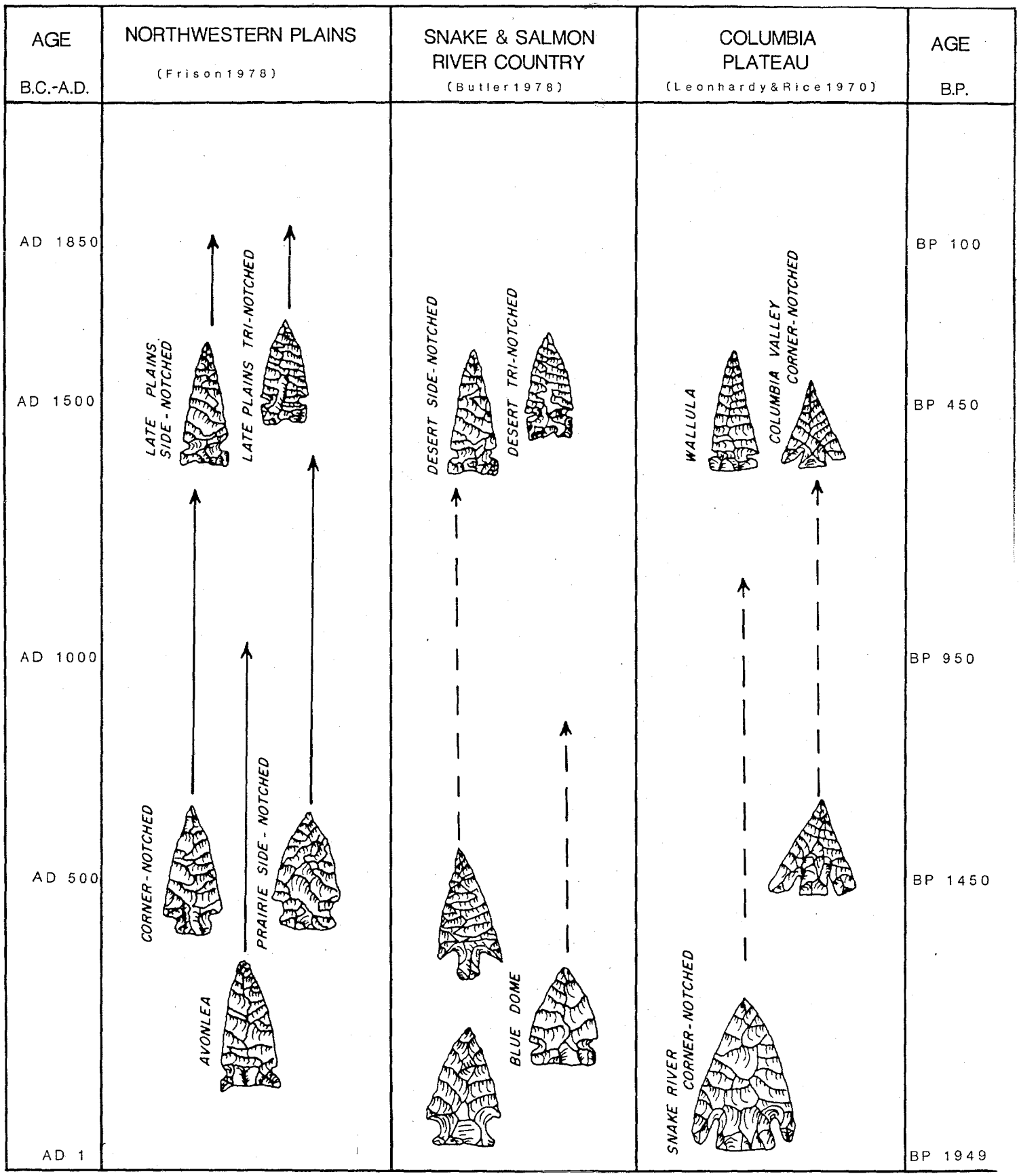
By this period, bison appear to have become the major prey species. These were hunted primarily east of the Continental Divide. However, small herds were also present in the larger intermountain valleys. Doubtlessly, these would have been exploited as well. Plants, however, were also exploited. Arthur (1968) suggested that root roasting pits may have originated during the late middle period, but the majority probably date from the later prehistoric period.

This period ends with the introduction of the horse and white trade goods. Both of these radically altered the aboriginal way of life. Figure 10c illustrates projectile points that date from the Late Prehistoric Period.



Photograph No. 3

Late Prehistoric Period Projectile Points
24SA155:Sear's Site
(1500 B.C. - A.D. 1700)



Late Prehistoric period projectile points

FIGURE 10C

4. Proto-Historic Period (A.D. 1700-1800)

The proto-historic period begins with the introduction of the horse sometime during the early eighteenth century (Haines, 1939). This in turn lead to vastly increased mobility. The increased mobility brought about greater contact between groups which increased warfare. At the same time, smallpox and perhaps other diseases appeared causing a fairly major shift in populations living east of the Continental Divide (Schaeffer, 1982). This may have opened up areas for hunting bison for tribes living west of the divide. These areas would have previously been considered the territory of an indigenous population but were not open. By the late eighteenth century, European trade goods would have begun to make their appearance. These would have been introduced from other neighboring tribes or perhaps obtained at aboriginal trade fairs or followed prehistoric trade routes.

Proto-historic sites in western Montana are relatively few in number. Most of these show evidence of European goods or the presence of horse remains in association with items of aboriginal manufacture, in this case lithics. Proto-historic sites in western Montana include 24GN130 (Matthew, 1982), Howard Creek (Light and McLeod, 1984), and possibly the Graybeal site where a radio carbon date of 140 B.P $\pm$ 180 (GAK8536) was obtained (Sappington, 1984).

This period ends with sustained contact with Euro-American people. For most of the groups in both Forests, this would have been Lewis and Clark or David Thompson, although some prior contact was known for some groups such as the Kootenai (Schaeffer, 1966). Following this aboriginal participation in the fur trade, resulted in increased dependency on white trade goods that completely altered the aboriginal way of life.

5. Early Historic Period (A.D. 1800-1855)

The historic period begins with the verifiable evidence of Euro-American presence within the area. Northwestern Montana was one of the last areas to be explored by Europeans, and for this reason, the historic period begins much later here than elsewhere in the country. In Idaho there are hints that a Frenchman named Sassaway, Salsaway (Selway?) was among the Nez Perce Indians as early as 1780 (Sandoz 1964:315).

The first Europeans to enter western Montana may have been two furtraders, LeBlanc and LaGasse, who worked for the British Northwest Company, in about 1801. These men may have traveled south from Canada into the Tobacco Plains country, or journeyed further west and wintered with the Spokane Indians near present day Colville (Choquette and Holstine, 1980:51). Unfortunately, they kept no written records and their journey cannot be verified.

It was not until the 1805 entry of the Lewis and Clark Expedition into the Bitterroot Valley that the first documented accounts of Euro-Americans occurs in the area of the Lolo/Bitterroot National Forest. The Lewis and Clark Expedition traversed lands within the study area in 1805 enroute to the Pacific Ocean and again in 1806 on their return journey. The purpose of the Lewis and Clark Expedition was to explore and substantiate claim to the Louisiana Purchase which had been acquired from France in 1803. President Jefferson's instructions to the expedition were detailed and specific. First, they were to explore the Missouri River to its headwaters and then to locate a practical water route to

the Pacific Ocean (Devoto, 1953:5). Secondly, their orders required them to "fix" geographical positions by astronomical observations to facilitate accurate map making. Finally, they were to make detailed notes and observations on the flora and fauna, soils and mineral potential, as well as life styles and patterns of dress of the native inhabitants (Goetzman, 1967:5). The expeditions trek over the Lolo Trail, which crossed the Bitterroot Mountains from present day Lolo, Montana, to Weippe, Idaho, was one of the most difficult aspects of their entire journey.

During the early 1800's, northwestern Montana was claimed by both British and American interests. However, it was the British fur trading companies that established the first permanent posts in the area. However, at least one other party of Americans reached western Montana before David Thompson. Among the men may have been "the mysterious Jeremy Pinch" and Charles Courtin (Goetzman 1967, Josephy 1965). Courtin is reputed to have ascended the Missouri River from St. Louis in 1807 and apparently reaching western Montana the same year or early in 1808. Early in 1810 Courtin was killed by Piegon Indians near present day Dixon, Montana.

David Thompson, an employee of the British-based Northwest Company, first entered Montana in 1808 in the Kootenai River country near present day Libby. In 1809, Thompson constructed "Salish House" approximately 2 to 3 miles east of present day Thompson Falls (White, 1942:255). Thompson explored much of northwestern Montana as well as a large part of the Pacific Northwest between 1808 and 1812. More importantly, he accurately recorded his travels and observations in a manner that provides excellent insight into the early fur trade period in Montana.

The Hudson's Bay Company, the major competitor of the Northwest Company, soon followed, and in 1810, sent Joseph Howse into the region. Howse spent the winter of 1810 and 1811 in a temporary post called "Howse House," constructed either on the Jocko River or near the north shore of Flathead Lake (Choquette and Holstine, 1982, and Braunberger and White, 1964).

American traders also attempted to access the fur trade of northwestern Montana in the early 1800's. John Jacob Astor established Fort Astoria near the mouth of the Columbia River in 1811. Astor wanted to compete with the British Northwest Company and quickly sent groups of traders up the Columbia River and into the Kootenai River and Clark Fork River drainages. These "Astorians," as they were called, established several posts in this interior region in direct competition with the Northwest Company. The war of 1812 prohibited Astor from sending a resupply vessel to Fort Astor and without trade goods, the Astorians were basically out of business. In 1813, Astor sold his interests to the Northwest Company, and many former Astorians went to work for the British Fur Company (Choquette and Holstine, 1982:66).

For the next several years, the British controlled all of northwestern Montana and northern Idaho. Competition remained extremely keen between the Northwest Company and the Hudson's Bay Company, and in 1821, the Northwest Company merged with the more powerful Hudson's Bay Company. At this time, the Hudson's Bay Company acquired several new fur trading posts as well as former employees of the Northwest Company.

Americans had a limited presence in northwestern Montana during the fur trade period (1800-1840); however, some well known mountain men were known to have entered the region as early as the mid-1820's.

In 1824, the Hudson's Bay Company (HBC) initiated the Brigade Trapping System. Basically, this system consisted of the company hiring large numbers of trappers who traveled and worked closely together for safety and logistical purposes. By 1824, the HBC began exploiting the Snake River country of southwestern Idaho. Their purpose for traveling so far south was not only to acquire rich trapping areas but to essentially "trap out" the region to discourage the Americans from entering and eventually claiming the area.

During the winter of 1823 and 1824, Alexander Ross and his Hudson's Bay Party wintered near present day Sula, Montana, while enroute to the Snake River country. In 1824, Ross' men encountered the American trapping party led by Jedediah Smith in the Salmon River country. Smith, who is credited with having explored more of the American west than any other person of his day, returned with Ross to Flathead Post to spend the winter of 1824 and 1825. The British were not pleased that Ross had allowed Smith to return with him, and Ross was replaced by Peter Skene Ogden as head of the Snake River Brigade (Franzen, 1981:122).

After Smith's first visit to the area in 1824, other Americans followed. In the late 1820's, David Jackson, Smith's fur trading partner, explored the Flathead Lake country. Also, Joshua Pilcher, another American, led a trapping party to Flathead Post in 1828. Pilcher offered to lead a joint British and American expedition into the Blackfoot country, but his offer was declined by the British (Choquette and Holstine, 1982:67).

During the 1830's, the lands that today comprise the Lolo and Bitterroot National Forests were dominated almost exclusively by the British Hudson's Bay Company operating out of Fort Colville. In 1831, John Work of the Hudson's Bay Company led his Snake River Brigade east over the Lolo Trail into the Bitterroot Valley. Work and his group are the only people reported to use the Lolo Trail during the fur trade era. Most trapping parties apparently preferred the easier major river valleys such as along the Clark Fork, Kootenai, and Bitterroot Rivers (McLeod, 1984).

By the mid-1840's, the Hudson's Bay Company had abandoned Flathead Post and moved its location to south of Flathead Lake. Here Angus McDonald established Fort Connah in 1847. This was the last trading post built by the Hudson's Bay Company within the United States. Fort Connah played a significant role as a major supplier of buffalo products for Fort Colville further west. Fort Connah continued to fill this role, as well as that of a major trade center for local Indian groups until it was abandoned in 1871 (Choquette and Holstine, 1982:68).

The fur trade had a profound effect upon the indigenous people of western Montana and northern Idaho, as well as groups throughout the west. The influx of such items as firearms, metal cooking pots, alcohol, and a wide variety of trade items triggered rapid and profound cultural change among the native groups. These effects, such as changes in subsistence strategy, increased warfare, and in some cases, the displacement of entire groups, have been discussed and studied by anthropologists and historians for many years.

Another group of Euro-Americans entered western Montana and northern Idaho during the first half of the 19th century and also had a profound effect upon the indigenous native people. Missionaries of both the Catholic and Protestant sectors began coming west in the late-1830's and early-1840's. Their hope was to establish permanent missions among the various tribes and eventually to convert them to the Christian faith. In 1835, the Reverend Samuel Parker, a Presbyterian, traveled west to the Annual Trappers Rendezvous. There he met a group of Nez Perce and Flathead Indians with whom he agreed to travel home. Parker traveled west with Jim Bridger as far as the Henry's Fork of the Snake River. From here, Parker continued west to the North Fork of the Salmon River, then turned north and met the southern Nez Perce Trail (Josephy, 1965:120-130). Parker and a group of Nez Perce Indians crossed the trail which traverses the Magruder corridor of the Bitterroot National Forest eventually reaching central Idaho. Henry Spaulding and Marcus Whitman were also Presbyterian missionaries who established missions in western Idaho and eastern Washington during the same period.

In Montana, the Flathead Indians had more than once requested that Catholic priests come to their country. In fact, beginning in 1831, the Flathead Indians had sent four separate delegations to St. Louis, each requesting that Catholic missionaries or "black robes" be sent to the Bitterroot Valley (Wilkerson, 1968:23). It was not until 1841, however, that Fathers de Smet, Mengarini, and Point with the assistance of two lay brothers, built St. Mary's Mission near present day Stevensville, Montana (Forbis, 1951:37).

Shortly after establishing the St. Mary's Mission, Father De Smet traveled extensively throughout western Montana and northern Idaho. In 1842, he ordered Father Nicholas Point to open another mission among the Coeur d'Alene Indians. This mission lasted until 1846, when it was destroyed in a flood. In 1848, Father Anthony Ravalli began work on a more permanent mission at Cataldo. The Cataldo Mission opened in 1852 or 1853, and it is still in use today.

St. Ignatius Mission was established at the foot of the Mission Mountains near Fort Connah in 1854 by Father Hoecken.

Throughout western Montana and northern Idaho, the early missionaries, both Catholic and Protestant, had an enormous effect on the indigenous native American groups. For the most part, relations were amiable and the missionaries played a major role in the early settlement of the area. Figure 11 shows the location, time period, and distribution of the early settlements in the Region from 1800 to 1855.

In the early 1850's, Euro-American settlement was almost nonexistent in western Montana and northern Idaho, except for Hudson's Bay trading posts and a scattering of Catholic and Protestant missions. However, elsewhere in the American west, tremendous changes were occurring. The United States had fought a war with Mexico and acquired Texas, California, and other lands in the southwest. Settlers had begun traveling overland along the Oregon Trail to the Pacific Coast. Gold had been discovered in California in 1847 which initiated a major rush of people to the gold fields. Also, tremendous technological changes had also occurred. The invention of an effective steam engine by James Watt in the late-1700's, the subsequent invention of the steamboat, and an effective steam railroad rapidly changed the American west and western Montana and Idaho.

In 1850, John Owen, a former army sutler, came to the Bitterroot Valley with his brother Frank and Snake Indian wife Nancy. The Jesuits, who had recently abandoned St. Mary's Mission, agreed to lease the facilities to Owen. Owen hoped to establish a trading post. This transfer of property was probably the first legal transfer of land in Montana (Howard, 1963).

The former mission apparently did not satisfy Owen's needs and in 1852 he moved the fort approximately one-half mile east of St. Mary's Mission. Owen believed the new location would provide better protection from the elements as well as from hostile Indians (Wilkerson, 1968:28). Owen's relations with the local Indians were generally good. However, in 1852, he described in his journals how horses were stolen and a man in his employ was killed and scalped by marauding Blackfoot Indians within the site of the fort (Dunbar and Phillips, 1927:48). John Owen briefly abandoned his fort in the spring of 1853 because of possible problems with the Blackfoot and financial hardship. However, Owen quickly re-established the fort in the fall of 1853 when he learned the US Army was to construct a provisional depot in the Bitterroot Valley. The Army's purpose was to begin a series of surveys for possible railroad routes to the Pacific Ocean (Wilkerson, 1968:30). The presence of regular troops provided the protection as well as the necessary markets to run a successful trading operation.

Jefferson Davis, the secretary of war at this time, authorized surveys to be conducted throughout the west with hopes of building a railroad from the Mississippi River to the Pacific Ocean. Isaac Stevens, the newly appointed governor of Washington Territory, commanded those detachments exploring the Pacific Northwest which consisted of both military and civilian surveyors. Cantonment Stevens was established in the Bitterroot Valley a few miles south of Fort Owen in 1853. Governor Isaac Stevens proceeded west to Washington territory and left Cantonment Stevens during the winter of 1853-1854 under the command of Lieutenant John Mullan. Mullan and his men explored much of western Montana searching for a practical route for a railroad. Although a railroad was not built for many years, the knowledge Mullan gained of the country greatly assisted him during construction for the "Military Road" (Mullan Road) from Walla Walla to Fort Benton in the early 1860's.

A. W. Tinkham, a civil engineer under Stevens, crossed the southern Nezperce Trail from Idaho into the Bitterroot Valley. Tinkham also explored much of the Swan Valley and Mission Mountains as well.

In 1855, Governor Stevens returned from Olympia with hopes of engaging in treaties with the various Indian groups. His first treaty was signed near Walla Walla with the NezPerce, Umatillas, Cayuses, Walla Wallas, and the Yakima (Fahey, 1974:93). It was early July when Stevens arrived in the Clark Fork Valley, near Missoula, to negotiate a treaty with the Flathead, Pend'Oreilles, and Kootenai tribes. The Flathead and Kootenai did not share a common language and in past years had often fought. For these reasons, the establishment of a combined reservation was not readily accepted by the Indians.

Nevertheless, the Hellgate Treaty was signed by Stevens and the Flathead "Chief" Victor at Council Grove in July of 1855. The Kootenai and Pend d'Oreille groups resided in the Mission Valley near the St. Ignatius Mission while the Flatheads continued to live in the Bitterroot Valley. It was not until 1891 that the Flathead Indians agreed to leave the Bitterroot Valley.

The Hellgate Treaty of 1855 effectively opened western Montana to settlement, and in a few short years settlers began moving into the Bitterroot Valley, gold was discovered in northern Idaho and western Montana and the stage was set for a rapid influx of Euro- Americans into the area.

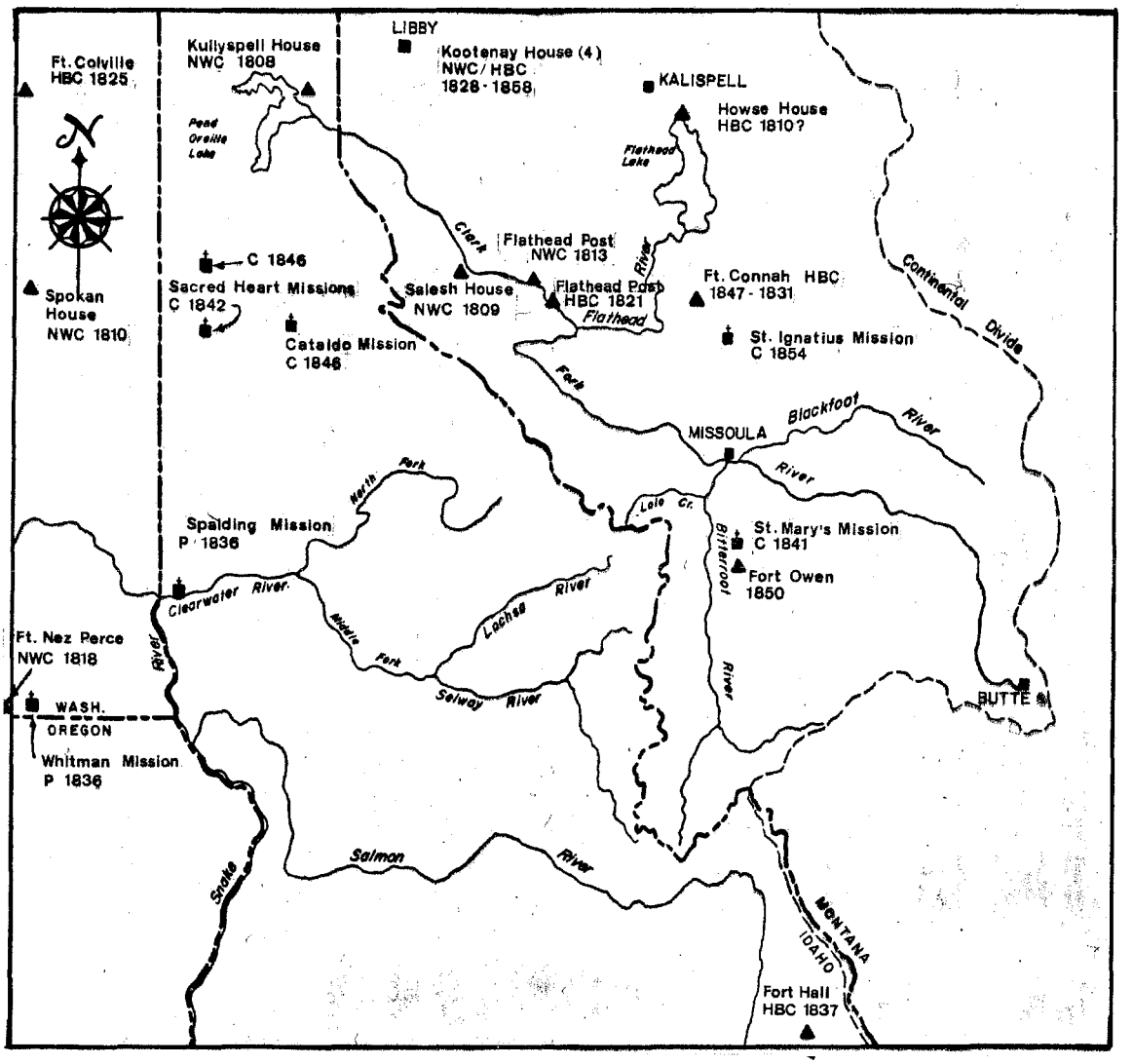


Fig. // Location of early settlement in western Montana and Idaho.
Fur Trading Posts and Missions - 1800 to 1855

▲ FORT or POST
HBC Hudson Bay Company
NWC Northwest Company

MISSION
P Protestant
C Catholic

VI. PREHISTORIC SITE TYPES ON LOLO AND BITTERROOT NATIONAL FORESTS

The following site types are known to occur within the boundaries or adjacent to lands administered by the Lolo and Bitterroot National Forests. Other types of prehistoric sites may be found in the future as more sophisticated cultural resource inventories are implemented.

A prehistoric site is one that was used or occupied prior to written records, which in western Montana and east-central Idaho is as late as the early 1800's. Often times, a site may have more than one time period of occupation. A stratified site may contain occupation levels from the earliest time period (Paleo Indian) up through and including the late prehistoric. In other cases, a site may contain more than one component such as an open air occupation site with scarred trees located nearby, or a rock shelter with several occupation levels which also contains associated rock art such as pictographs or petroglyphs.

An accurate, all-inclusive type definition for a prehistoric site can be difficult to describe. However, Ames and Marshall (1980) have provided one which is relatively all inclusive.

> A site is any location used for habitation. Sites need not be continuously occupied, nor necessarily occupied by a group. It needs only to have enough use by a person, group, or unrelated people so that human presence there is noticeable (Ames and Marshall, 1980:27).

The following discussion is a description of the types of prehistoric sites found within the Lolo and Bitterroot National Forests:

A. Pit House - Village Sites

These sites are the major occupation type site for the Nez Perce Indians of central Idaho. They are also found throughout the Plateau, Northwest Coast, Great Basin, and southwest cultural areas. These villages were occupied along the major rivers primarily during the winter months. Pit house villages were once thought to mark the beginning of the Harder phase approximately 4300 B.P., which intensively exploited the anadromous fishery (salmon and steelhead) as well as root resources. However, recent evidence shows that pit house village sites were used 4300 B.P. at Hatwai (10NP143) on the lower Clearwater River (Ames and Green, 1979).

Pit house village sites did not extend further east than the confluence of the North Fork and Middle Fork of the Clearwater River, or south beyond the confluence of Slate Creek with the main Salmon River (Spinden, 1908:173). However, recent archeological surveys conducted in Idaho have recorded possible pit house villages as far east as the Lochsa and Selway Rivers and Corn Creek along the main Salmon River. Archeological research has expanded the ethnographic distribution of pit houses from what was once thought to be their range. Their range may indeed be expanded in the future.

These site types have not yet been found in the archeological record along the Clark Fork, Flathead, or Bitterroot Valleys in Montana.

B. Campsites

Sites within this category include a wide variety of both open air and sheltered campsites. Basically, a campsite represents the location where a group (large or small) lived for an unspecified period of time. Campsites would include pit house villages, rock shelters and overhangs and areas where perhaps hide or brush shelters were used as well as open air sites where no evidence of living structures exist.

The types of cultural remains or artifacts found at these sites are indicative of the types of activities conducted by the group during their stay at the site. Features such as fire hearths, roasting pits, chipped and/or ground stone, bone tools, thermally altered rocks, and faunal remains may all be found at these sites. These sites usually occur in somewhat predictable areas such as along river terraces, near the confluence of drainages, and near water in relatively gentle open country.

1. Rock Shelters

Rock shelter sites are natural caves or rock overhangs which have been occupied by prehistoric people, often times repeatedly for many years. These sites are limited to geologic areas conducive to forming natural caves or rock overhangs. Rock shelter types are unique as they are one type of occupation site that can occur on slopes over 30 percent and away (250+ meters) from a permanent water source.

2. Teepee Rings/Stone Circles

These occupation sites occur in large numbers on the northern plains and may date from 3500 B.P. up to the historic period A.D. 1800+. On the lands administered by the Lolo and Bitterroot National Forests, teepee rings are not a common site type. Furthermore, teepee rings and/or stone circles are not overly abundant in western Montana, but nevertheless they do occur. These site types have been recorded on the Flathead Indian Reservation near Niarada, at Grant Khors National Historic Site in the Deerlodge Valley, at the Avon quarry site near Avon, and in the O'Brien Creek drainage near Missoula. One teepee ring site (24RA60) has been recorded in the Bitterroot Valley.

Teepee ring sites are usually dependent upon the general requirements for an occupation site discussed within VI-B. However, their presence is also dependent upon the presence of suitable stones large enough to weight down a hide and pole structure usually in a circular form.

C. Quarry Sites/Lithic Procurement Areas

These sites are areas where prehistoric peoples sought certain specific raw materials for the manufacturing of stone tools. These site types are very similar in their function, the procurement or extraction of workable stone for tool manufacturing. The locations of these sites are determined by the presence and availability of the raw material sought by prehistoric peoples.

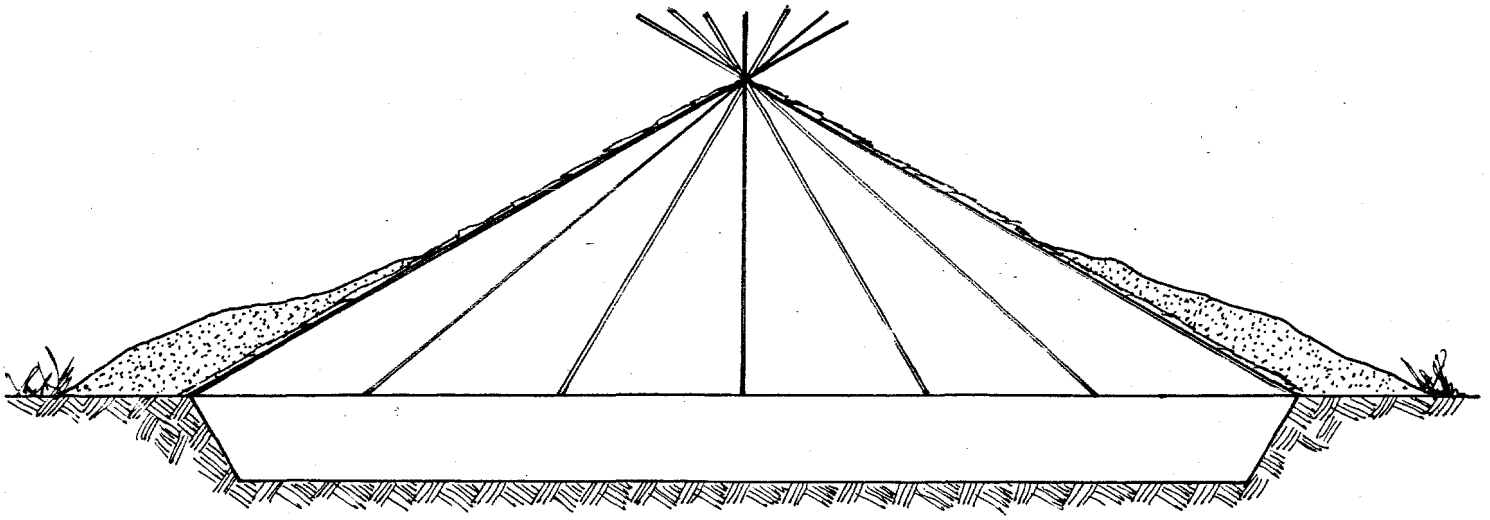


FIGURE 12a Cross-Section of typical pithouse structure.

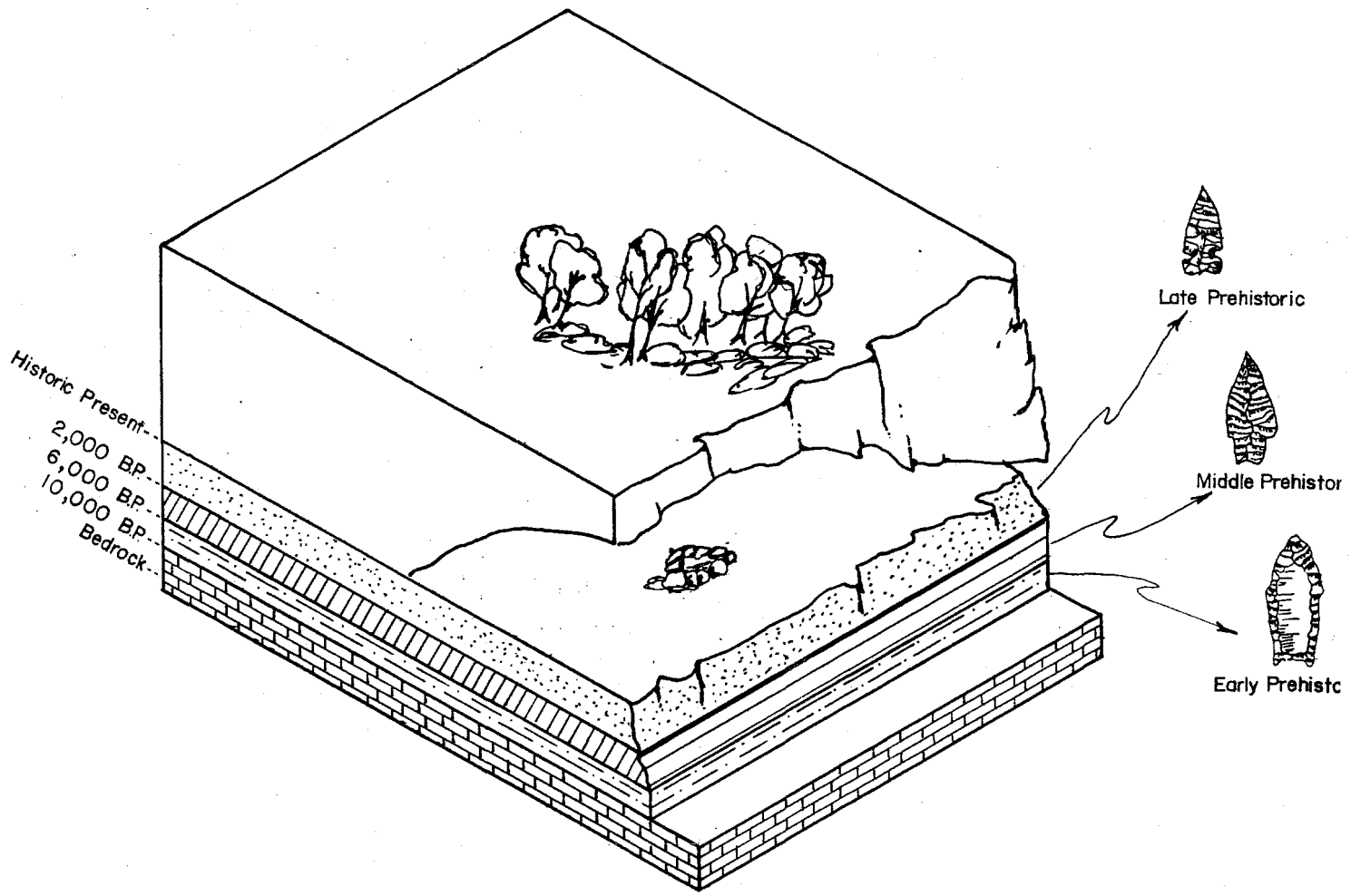
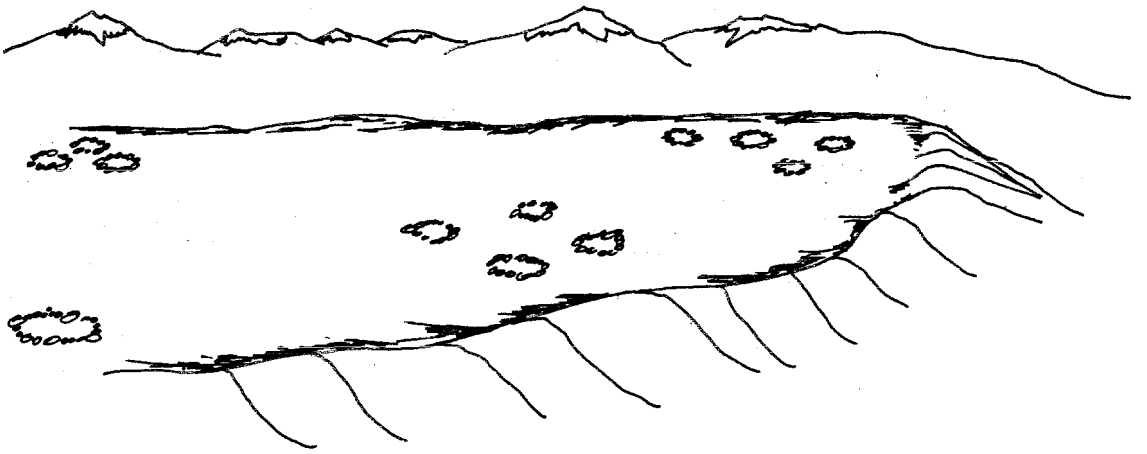


FIGURE 12b Illustration of typical rock shelter.



(Above) Aerial view of a cluster of tipi rings

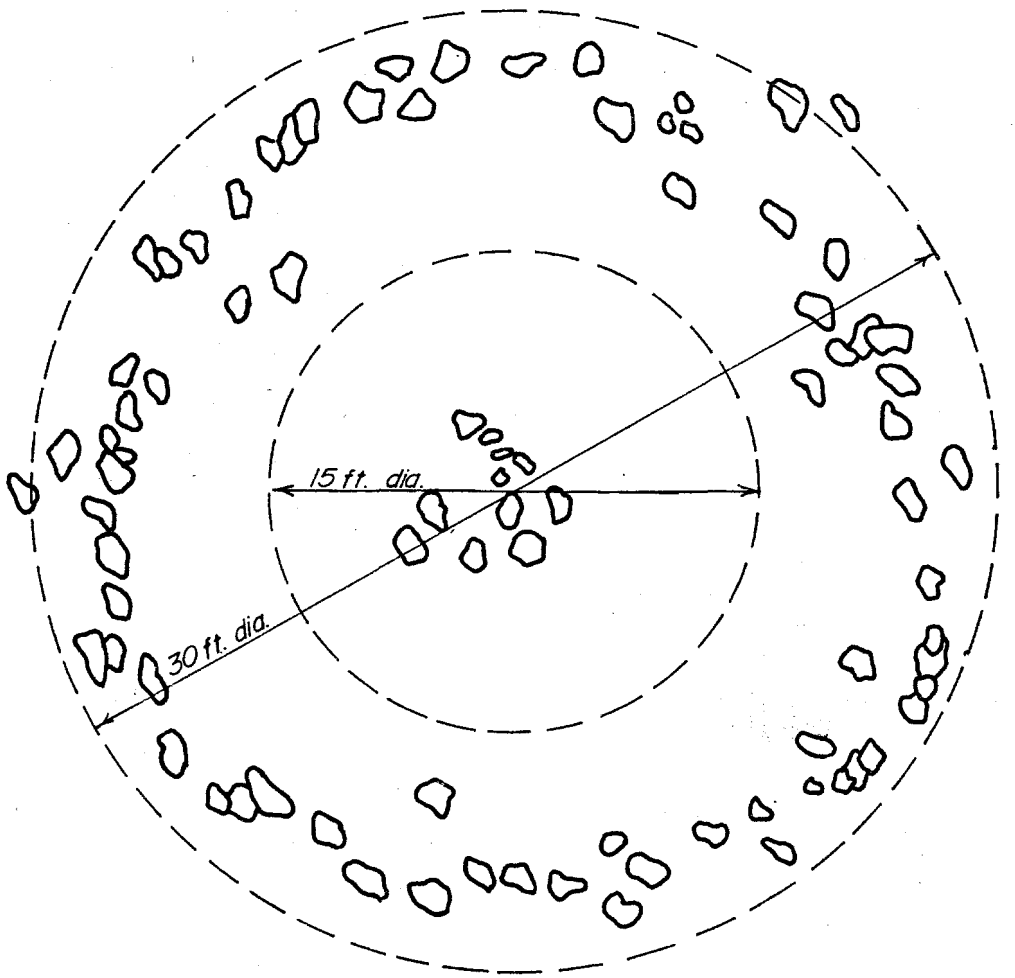


FIGURE 12c Illustration of typical tipi ring site.

A primary material that occurs in quarry sites or lithic procurement sites on or adjacent to the Lolo and Bitterroot National Forests is chert, such as occurs near Avon at Site No. 24PW340 and within the Flint Creek drainage at the Devils Eyebrow (24GN501). A dark brown to black solidified silt stone occurs within the Ninemile Valley at Site Nos. 24MO40 and 24MO75. Basalt is also a common material for manufacturing stone tools, and workable material can be found near Bearmouth, Montana, at Nevada Creek near Avon, or in boulders and cobbles deposited along the Clark Fork River.

Quartz crystal, while not a common raw material type, nevertheless was used in some instances. Large quartz crystals occur naturally within the Granite Creek drainage near Lolo Pass, and finished artifacts made from quartz have been found within the artifact assemblages along the Montana-Idaho State line. Finally, vitrophyre, a green obsidian-like material which is a vitrified ash with excellent flaking properties, is reported to occur naturally in outcrops along the Montana-Idaho State line near Cache Saddle (Fredlund, 1977). Artifacts and chipping debris of this material have been found at prehistoric sites in both western Montana and east-central Idaho (McLeod, 1984:35).

Artifacts and lithic material manufactured from other material does occur within artifact assemblages on the Forests, but it appears in most cases to have been imported from outside the area. Obsidian, for instance, is not known to occur in natural formations within or adjacent to the Lolo and Bitterroot National Forests. Nevertheless, artifacts as well as waste flakes are found at sites on both Forests. The nearest natural sources for obsidian are in Yellowstone National Park, Timber Butte (near Boise, Idaho), and eastern Oregon, as well as the Centennial Mountains in southwest Montana.

Quarry sites usually show evidence of actual extraction of the raw material from bedrock formations. Evidence of actual digging into a hillside to create addits or shafts is usually present at these sites. Lithic procurement areas, on the other hand, seldom show evidence of digging or prehistoric mining techniques. Rather, the raw material often times occurs naturally in the form of boulders or nodules and little effort is expended in the actual procurement of the raw material. Large percussion formed primary flakes usually occur on both quarry and lithic procurement sites as tools were generally "roughed out" into blanks to be finished later at their place of use. For this reason, finished artifacts are seldom found at quarry or lithic procurement sites. However, at major source areas it is not uncommon to locate one or more occupation sites nearby. This is exemplified at such sites as at the McHaffie site near Helena and the Nevada Creek sites near Avon, Montana. This is probably because the procurement of raw materials was a sizable undertaking and required the efforts of several people for an extended period of time.

Quarry/lithic procurement sites are significant in western Montana primarily because of their scarcity (to date, only a handful have been recorded). These sites are usually significant regionally as they have the potential to provide information about prehistoric trade networks, travel routes, and possible subsistence strategies.

D. Lithic Scatters

Lithic scatters or lithic workshops contain the remains of stone tool manufacturing, repair, or sharpening. These sites can be very small or very

large in area and contain only a few flakes or a very large number. These sites occur throughout the Lolo and Bitterroot National Forests and are probably indirectly associated with a variey of activities. For example, the lithic scatters that occur in the saddles of high ridges within the Forest may have resulted from a lone hunter finishing a tool, perhaps roughly shaped at a quarry or lithic procurement site many miles away, or reshaping or sharpening a tool that had broken or become dull from extended use.

Sometimes, lithic scatters/workshops may represent the only remains of a campsite. In such cases, classification of the site as an occupation campsite or lithic scatter becomes rather arbitrary and will have to depend upon factors such as the site's setting, proximity to water, etc.

Cultural material found at sites of this nature generally consist of secondary lithic reduction debris. Interior flakes (flakes that lack cortex), small retouch flakes, and nearly completed or broken tools may occur as well as "spent" or discarded cores.

It is difficult to fit lithic scatters into a research design since they generally contain little datable material or specific information. Analysis of material types found at lithic workshops may yield information concerning resource exploitation and/or trade networks. Also, comparison of the characteristics of lithic workshops with those of other site types may enable one to identify more specific activities represented by the ubiquitous "lithic scatter."

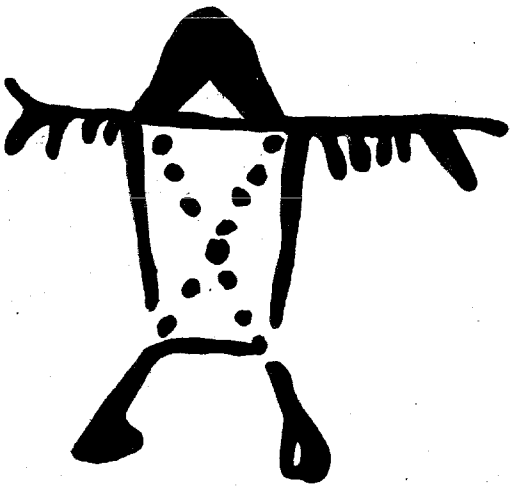
E. Rock Art

Rock art consists of pictographs (painting on rock faces and outcrops) and petroglyphs (designs carved or pecked into a rock wall or stone face). Presently, in western Montana the only art forms that have been recorded are pictographs (rock paintings).

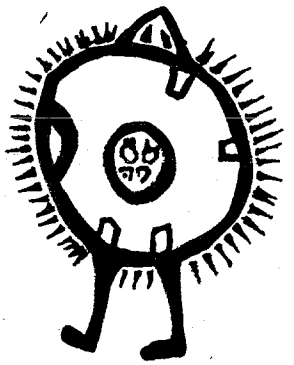
A fairly large number of pictographs have been found within the Bitterroot Valley, a few in the Clark Fork Valley, and some around Flathead Lake and the Lower Flathead River. These paintings, which may depict anthropomorphic or animal figures as well as geometric designs, occur on flat faces of rocky outcrops, and appear to be fairly common along well traveled prehistoric travel routes. Malouf (1961) has offered several interpretations as to the function of pictographs. They may have been used to mark the location of vision quest sites, and may represent sites associated with hunting magic or puberty rituals.

Keyser and Knight (1976) have suggested that some of the pictographs found in western Montana are stylistically similar to those associated with the Shoshone and other ethnic groups from areas east of the Continental Divide.

Rock art sites are not as common in western Montana as in the southwestern United States or on the northern Plains in Montana east of the Continental Divide.



A. Anthropormorphic Figure



B. Shield-bearing Warrior

C. Serpent Motif

D. Tally Marks

FIGURE 12d Illustrations of typical rock art.

F. Scarred Trees

Scarred trees are a fairly common site type within the lands administered by the Lolo and Bitterroot National Forests. These scars usually occur on large old growth ponderosa pine. However, scarred tree sites of cottonwood, lodgepole pine, and western larch have also been recorded in western Montana. Scars on the trees resulted from, presumably, aboriginal people stripping away that portion of the bark containing the sugar rich cambium layer, usually in the spring of the year. Generally, these trees are large ponderosa pines and "scarred tree sites" occur in groups of from 2 to 25 scarred trees.

Lewis and Clark describe this practice and the large number of scarred trees they observed while traversing the Lolo Trail enroute to the Pacific Ocean in 1805 (Thwaites, 1969, Volume 3:63). Many of the scarred tree sites located on the Lolo and Bitterroot National Forests are located along the major streams and rivers such as Thompson River, Rock Creek, Lolo Creek, the East and West Fork of the Bitterroot River, and Camp and Blue Joint Creeks. The largest concentrations of scarred trees are found in open, south facing areas with gentle topography, close to water, and in areas which are also high probability areas for an occupation site. It is interesting to note that very little additional cultural material (i.e., lithic debris) has been found in association with these large concentrations of scarred trees. This may be the result of three separate factors. First, little formalized subsurface testing has been conducted at these sites in previous years, and duff, brush, and other types of Forest litter may obscure artifacts or other features on the site. Second, these sites that exist today were all made during the protohistoric or historic period (A.D. 1750-1900). Metal tools may well have replaced stone implements, and activities that would leave lithic remains were not performed at these sites. Thirdly, perhaps the procurement of the cambium layer was the only activity at these sites and the resource was transported to the campsite some distance away for final consumption.

Some scarred tree sites at Fishtrap Creek (24SA119) and adjacent to Camp Creek (24RA61) near Sula have yielded dates from the late 1700's up through the early 1800's. Subsurface testing and increment boring of individual trees should be conducted at a representative sample of scarred tree sites. The results of this type of testing should provide the culture resource specialist with adequate information to make a formal determination of eligibility for the National Register of Historic Places.

Scarred tree sites were once thought to be a site type unique to western Montana. However, within the past few years scarred trees (usually ponderosa pines) have been found in eastern Washington and Oregon, as well as in Idaho, Colorado, New Mexico, and Arizona.

FIGURE 12e Illustration of typical scarred (cambium peeled) tree

FIGURE 12f Illustration of stone cairn with associated Indian trail

G. Trails

Several important prehistoric travel routes are located within the Lolo and Bitterroot National Forests. Many of these trails continued to be used into the historic period, and even today some modern transportation systems (highway, railroads, etc.) follow the general route of these prehistoric travel routes.

One of the primary prehistoric travel routes is the Lolo Trail which extended between present day Lolo, Montana, and Weippe, Idaho, a distance of approximately 150 miles. The fact that this trail existed in proto-historic and late prehistoric times is evidenced by the fact it was a well known and popular route across the Bitterroots in 1805 when the Lewis and Clark expedition traversed the trail enroute to the Pacific Ocean. Also, the presence of several prehistoric sites (24MO120, 24MO105, etc.) located along or adjacent to the trail are indicators of the trails long-term use by Native Americans.

The southern Nez Perce Trail on the Bitterroot and Nez Perce National Forests is another significant prehistoric as well as historic travel route. This trail extended from the Nez Perce Fork of the Bitterroot River west along the crest of several major ridge systems to the vicinity of Elk City, Idaho. Again, several short-term occupation sites have been located along or adjacent to this trail indicating use of the route prior to the historic period.

Other significant prehistoric trails exist on both Forests, i.e., the Kootenai Trail near Thompson Falls. Sometimes, these early trails have been used and maintained up to the present day such as portions of the Lolo and southern Nez Perce Trail. In some cases, portions have been obliterated by activities such as road construction or logging activities. Besides the trail tread, other physical indicators may exist such as scarred trees, bent tree trail markers, rock cairns, temporary campsites, or isolated artifacts and/or lithic material.

Trails can be a very fragile type of cultural resource since they are easily impacted by a variety of activities. Visual impact created by such activities as timber harvest and powerline construction may destroy the integrity of a trail just as easily as destruction of the tread or cutting down tree markers or scarred trees.

Primary prehistoric trails such as the Lolo Trail, Southern Nez Perce Trail, and the Kootenai Trail may be eligible for listing on the National Register of Historic Places, respectively. (The Lolo Trail currently is listed on the Register and is a National Historic landmark.) Other secondary and perhaps tertiary prehistoric trails such as the Continental Divide, the Sapphire Bitterroot Divide, and Ninemile Divide probably exist on the Forest. In fact, most long interconnecting ridge systems appear to have been used as prehistoric travel routes. Unfortunately, no written documentation exists confirming this fact, and our only evidence is the topographic setting interspaced with the occasional isolated artifact, lithic material, or small occupation site.

H. Stone Cairns

Stone cairns pose a special problem for archeologists and historians. These sites are very common, yet little can be said about their function. Cairns probably represent a variety of activities and may date from either the prehistoric and/or the historic period. Cairns may have been used to mark

trails, burials, food caches, or simply the location of an important event. Cairns may consist of only five or six or perhaps hundreds of rocks. However, few contain additional materials that can be dated or provide further indications of the function of the cairns. The origin and function of many of the stone cairn sites on the Forests will probably never be known. Probably the best ways to evaluate these sites is to consider them within a wider archeological framework (i.e., in terms of their relationship to other site types which may be located in the same vicinity). For further information on stone cairns, see Malouf, 1962, 1963, and 1964.

I. Burials

Burials are not a common site type on either the Lolo or the Bitterroot National Forest. However, they do no doubt occur. Aboriginal burials have been found in the Bitterroot Valley (24RA50) (Ward, 1973), adjacent to Rattlesnake Creek near Missoula (24MO1071) (Taylor, 1974), and along the Clark Fork River west of Thompson Falls (24SA2) (Malouf, 1982:37).

Considering the occupational time span for western Montana and east-central Idaho, one could expect to find both primary (initial) and secondary burials on both Forests. This is because the archeological record indicates a variety of peoples have occupied the area for at least 6000 years and probably longer. As people died, they were interred in the appropriate manners specified by their cultural values and traditions. Also, the ethnographic record described the mortuary practices of those groups living in the area during protohistoric and the early historic periods.

Primary burials are those that occur at the time of death of the individual, while secondary burials consist of skeletal remains that have been redeposited. In primary burials, the position of the body within the grave may be prone, partially or fully flexed with the knees drawn up to the chin, and may be oriented with the head pointing in one of the cardinal directions. Some ethnic groups would initially lay their dead upon raised platforms, in rocky overhangs, or in trees. The bones and offerings would be collected later for internment (secondary burials). Site No. 24RA510 may have been a secondary burial.

Most groups of people buried their dead with some type of "grave goods" which would include the tools used and ornaments worn by the deceased during his or her life. The type of grave offerings, along with general features of the burial (i.e., position of the body, etc.) may indicate regional or temporal affiliation of the deceased.

The fact that few burials have been encountered on National Forest lands may be the result of several factors. First, a favorite location for burials appears to have been in talus slopes where a crevice could be dug in the rocks, the body interred in a flexed position and covered with stones. Over time, the creeping actions of the slope would completely alter the burial site making it unrecognizable. These burials would be encountered only with excavation or earth moving operations such as road building.

Secondly, burials in a coniferous forest environment would be subject to the highly acidic soils which rapidly deteriorates bone fragments.

Thirdly, the subsistence practices that appear to have been utilized by the ethnographic groups in western Montana did not allow for long-term sedentary villages or cemeteries as we know them today. When a person died, they were probably buried in a nearby talus slope or soft, easy-to- dig soil.

Burials do contain information critical to interpreting prehistoric lifeways as well as providing information about the individual such as diet and disease. However, burials by themselves can be a very controversial site type especially for Native Americans. Under the American Indian Religious Freedom Act (AIRFA), Federal agencies are required to consult with Native Americn groups if human remains are encountered or disturbed on Federal land.

J. Religious Sites

Religious sites can be described in several categories and time periods. Some religious sites were created during the late prehistoric, protohistoric, or early historic period and used for only a short period of time. Vision quest sites would be an example of such a site. Vision quest sites usually occur on high points of land in isolated areas and are simply a U-shaped outline of stones. An individual (young male) would sit within this area for one or more days until the climax of his quest. Most groups in western Montana and east-central Idaho participated in this religious activity. These sites may have been used repeatedly by the same individual. Other people may have sought visions within the same area, but the vision quest site was almost individual property and probably not used by other members of the group. Consequently, these sites would lose their religious meaning when the individual user died.

Other sites may hold a long-term religious value dating back to possibly the late prehistoric period and still contain religious values to some Native American groups today. The Medicine Tree near Sula and Medicine Tree Hill east of Missoula, Montana, are examples of these types of sites. Special areas where certain activities were conducted such as vision quests, the blue jay dance among the Flathead, and the sun dance among the Kootenai held important religious values in the past and may do so even today.

Some religious sites may contain archeological values and are/will be managed as any other cultural resource on the Forest. However, those sites that contain strong religious values for modern Native American groups will be managed separately in a manner acceptable to the Native American group and the USDA Forest Service.

To ensure that Native American religious sites are not impacted by Forest Service project activities, the Lolo and Bitterroot National Forests have recently initiated a consultation process with the Flathead and Kootenai culture committees. This process allows both groups to review proposed projects on both Forests to ensure that significant religious sites and/or areas are not indiscriminately impacted. The tribes are not required to divulge the type of site nor the exact location unless a direct project conflict exists. This process is to ensure respect and confidentiality for those religious sites currently in use or that contain significant religious values to Native American groups.

K. Roasting Pits

This site type appears relatively rare in western Montana and Idaho. The pits themselves are thought to be associated with preparation of various food stuffs. Richard Malouf (1979) has excavated several features in western Montana that he believed to be associated with camas processing. These were located in the Potomac Valley near Missoula. This area is well known for the abundance of camas during the historic period and even today. He describes the features as being circular depressions 7 to 8 feet in diameter and about 1 foot in depth. One of the pits he excavated contained charcoal and fire-cracked rock, but no artifacts or lithic material. One other pit excavated at a nearby site had apparently been cleaned out after use, as there was no material associated with it. Malouf (1979) also documented the presence of roasting pits among other nearby Native American groups. Other suspected locations for root roasting pits include Salish House near Thompson Falls, the Bitterroot Valley, and along Ninemile Creek. This site type has yet to be found on the Lolo and Bitterroot National Forests.

Although similar features have been found in Idaho, they are not always associated with root roasting. The portion of the Bitterroot Forest in Idaho contains several sites that have tentatively been identified as pit house village sites based on depressions that are similar in size and shape to the features described above. However, recent (1984) excavation of some of these sites at the Corn Creek village site (10LH124) has shown some of them to have been used as fresh water mussel roasting and processing areas containing an abundance of shell, firecracked rock, and some lithics (Holmer personal communication:1984). More recent interpretations, however, have proven these pits to have indeed been used for habitation and are pit houses (Ross:1986). Nevertheless, roasting pits are a site type that has probably been neglected by archeologists working in this area in the past.

VII. ETHNOGRAPHY: LIFE WAYS OF NATIVE GROUPS DURING THE PROTOHISTORIC AND EARLY HISTORIC PERIODS

This chapter deals with the recorded information about the historic Native American groups that occupied the area covered by both the Lolo and Bitterroot National Forests. These groups are the Kootenai in the north, Flathead and Pen d'Oreille in the Clark Fork and Bitterroot drainages, Nez Perce to the south and west, and the Shoshone to the south. Each tribe is discussed separately by listing a series of themes that present a general picture of the people's lifeways. The themes used in this chapter are: 1) origin and territory; 2) settlement and subsistence; 3) material culture; 4) housing and transportation; 5) social organization; 6) religion; 7) external relations; and 8) brief histories. Other topics such as Indian-white relations during the fur trade era are discussed elsewhere in this report.

The ethnographic record can be used in several different ways. One is to verify interpretations. This approach has been used most recently by Flint (1982, 1983), who compiled an extensive trait list which she then compares to the archeological record. Given the size of her trait list, it is not surprising that she sees her model fitting the ethnographic data. Conversely, several authors have pointed out that the ethnographic present does not necessarily reflect the archeological record (Kehoe, 1981). This has led to a second approach, which is to use the ethnographic record as a source of potential hypotheses for the use of analogy to interpret prehistoric remains. There are, however, limitations to this method. The principle one is that a good deal of the ethnographic literature is a reflection of the interests of the ethnographer; the questions an archeologist seeks to ask may not be addressed. Additionally, some archeologists have been able to point out inconsistencies in the recorded information.

We would seek to balance the problems inherent in the two approaches. In some instances, the ethnographic and archeological record may approximate each other. One problem hampering this section is that some of the groups discussed are better reported than others. The Pen d'Oreille, for example, remain almost unknown while the Flathead, Nez Perce, and Shoshone are well reported. The Kootenai, although fairly well reported, can be a confusing group to study because much of the literature appears to contradict itself.

The tribes described below are certainly not the only tribes that utilized the area covered by the Forests. The Blackfoot were known to raid into the Bitterroot Valley. Most travelers noted that this was to the detriment of the resident Flathead. All of the tribes described, however, considered portions of the area covered by the two Forests as part of their home range and claimed occupancy of the area.

A. Kootenai

The Kootenai represent a group that has been little studied or reported by anthropologists. Both Hudson, et al. (1981) and Manning (1983) note that the literature concerning this group abounds with contradictions or remains to be substantiated by archeological and ethnological investigators. Walker (1983) has compiled a partial bibliography for this group. The two major sources of information on this group are Turney-High (1941) and Schaeffer (1940).

1. Origin and Territory

The origin of the Kootenai has been the subject of considerable interest both to ethnographers and archeologists. Chamberlin (1892) stated that the Kootenai originated east of the Continental Divide and moved westward. This view was also supported by Hewes (1948). Both Turney-High (1941) and Schaeffer (1982) disagree. They suggest that the Tobacco plains area has some sense of being the original Kootenai location. Morgan (1977) adds a further note of confusion by suggesting that the Kootenai language may be distantly related to Salish. Regardless of their place of origin, accumulating archeological evidence suggests that they have inhabited portions of their aboriginal territory for some time (Reeves, 1978, and Choquette and Holstine, 1980).

Most researchers follow Turney-High's (1941:23-24) definition of Kootenai aboriginal territory. This basically is an area approximately 200 miles wide and 270 miles long in northwestern Montana, northern Idaho, southeastern British Columbia, and southwestern Alberta. Within this area, there were two divisions of the Kootenai; the upper and the lower. The territory of each group was divided by Kootenai Falls. The upper Kootenai territory was above the falls, while lower Kootenai was below the falls. Both groups, however, used the territory of the other group to some extent.

2. Settlement and Subsistence

Kootenai settlement and subsistence is and will probably continue to be a controversial subject. Currently, there are two archeological interpretations of this question. One interpretation sees the ethnographic pattern as being reflected in the archeological record (Choquette and Holstine, 1980). The other interpretation rather strongly suggests that the ethnographic pattern does not fit the material recovered from archeological sites (Schalk and Thomas, 1982, and Roll and Henry, 1982). Most authors, however, agree that site location is a reflection of the economic activity being pursued. This might be seen as a pattern of aggregation and dispersal throughout the year. Roll and Henry (1982:4.20) suggest that aggregation took place during the late fall-early spring to concentrate on wintering deer herds. Choquette and Holstine (1980) note that winter camps were located in sheltered valley bottoms. They further suggest that as resources became depleted, wintering bands would begin to disperse more widely. Turney-High (1941) also suggested that bands were fragmented into small groups during the summer. Upland areas were probably used at this time. Given the logistics and distances involved, it is unlikely that the Kootenai made three trips a year to procure bison on the Plains until fairly late prehistorically. The introduction of the horse during the protohistoric period provided the mobility and cargo carrying capabilities to exploit the Plains' resources on a regular basis. Most archeologists agree that the introduction of the horse radically altered the prehistoric settlement pattern.

Kootenai subsistence was based on the exploitation of a number of game animals, fish, and plants. Roll and Henry (1982) point out that the only large game animals capable of sustaining a long-term yield were deer. This is born out by archeological excavations in the Libby area. The Kootenai were known to have exploited a number of berry and root crops, but the exact contribution which these made to the diet were difficult to access. Turney-High (1941) suggests that other large animal such as caribou may have acted as a safety valve rather than a heavily exploited subsistence item. It is known ethnographically that the Kootenai fished. Roll and Henry (1982) have suggested that this resource is over emphasized prehistorically, although fish may have been more important to the lower Kootenai (Hudson, et al., 1980). While nongame animals such as grizzly bears were hunted (Schaeffer, 1965), their place in the broader patterns of subsistence remains to be demonstrated.

3. Material Culture

Kootenai material culture shows close links to the environment both in terms of everyday and ceremonial use. There are a limited number of papers that deal with specific topics of Kootenai material culture. These include pottery (Schaeffer, 1952), lithics (Choquette, 1981), and pipes (White, 1954). A number of authors have described Kootenai clothing in detail (Chamberlin, 1892, Curtis, 1911, Turney-High, 1941, and Baker, 1955). Particularly emphasized is "whiteness" of clothing (Hudson, et al., 1981:80).

The lower Kootenai were known for their distinctive bows. In fact, throughout early historic literature they are referred to as "arcs a plats" (flat bows) because of their distinctive flat bows. Arrow shafts were made of cedar or ocean spray (Hudson, et al., 1981). Both stone and bone projectile points are known from archeological sites. The Kootenai also made a variety of chipped and ground stone implements. Bone was also used as a raw material source. Dishes were made from antlers of caribou (Hudson, et al., 1981) and wood (Turney-High, 1941). Dishes of any sort have yet to be found archeologically.

4. Housing and Transportation

Kootenai housing has varied through time. At the time of white contact, the predominant house form among the upper Kootenai appears to have been a skin-covered lodge. According to Turney-High (1941:56), this type of dwelling had a four-pole base with as many as 15 poles completing the circle. Chamberlin (1892) stated the number of poles ranged from five or six to nine or ten. At times, these dwellings were brush or mat covered. The brush covered dwelling was also used in the area along the eastern slope of the Continental Divide. This may have led some early travelers, such as David Thompson, to erroneously note that this might have been Kootenai territory (Schaeffer, 1982). Turney-High (1941) mentions the presence of long houses. The typical plateau style pit house does not appear to have been used. The remains of any type of Kootenai dwelling have yet to be excavated.

Throughout much of their history, Kootenai transportation was largely pedestrian. Most of the major routes made use of major rivers and other natural features. Turney-High (1941) states that dogs were used strictly as pack animals. The travois was not used. The Kootenai adopted the horse sometime during the eighteenth century (Schaeffer, 1982). The horse was used in a

similar fashion as the dog. Both Mason (1899) and Turney-High (1941) discuss Kootenai canoes. These canoes are best known for their similarities to those from the Amur Basin of Siberia. To date, the place of canoes in the larger picture of Kootenai transportation systems has not been assessed. It is known that the Kootenai used snowshoes during both the prehistoric and historic periods.

5. Social Organization

As noted above, the Kootenai were divided into two major groups. Each of these groups was further subdivided into a series of distinct bands. The bands were recognized by their geographic location, mostly their wintering locality. Turney-High (1941) recorded eight such bands. Bands were politically and geographically autonomous; however, membership within bands was flexible with the ability of individuals to move freely between bands. These bands were linked to each other via kinship and marriage. Turney-High (1941) suggests that the Tobacco plains band may have had some sense of being the originator of all other bands.

The extended family was the basic social unit. Residence was matrilocal. Descent was weakly traced bilaterally (Lindburg, 1962:20, cited in Hudson, et al., 1981). A variety of sexual specific tasks were performed, mostly related to subsistence. Any form of social stratification is thought to be a posthorse development (Choquette and Holstine, 1980).

The ethnographic literature contradicts itself on whether there was a single position of band leadership. Lindburg (1962, cited in Hudson, et al., 1981) notes there was no single position of leadership; however, both Curtis (1911) and Turney-High (1941) suggest that chieftanships among bands were hereditary or weakly hereditary. There were a variety of lesser chiefs whose functions were primarily related to subsistence activities. The office of warchief appears to be more highly developed among the upper Kootenai than the lower (Hudson, et al., 1981). Band councils were also present in addition to band chiefs.

6. Religion

Hudson, et al. (1981:84) notes that the historic and ethnographic literature abound with references to the Kootenai's honesty and high moral character. The Kootenai are generally perceived as being a deeply religious people.

The Kootenai believed in the concept of the guardian spirit. The guardian was sought by either sex as an adolescent. If an individual was fortunate and obtained a guardian spirit, this would provide the individual with a personalized means of obtaining guidance and assistance (Hudson, et al., 1981). Those who were able to obtain strong spiritual power became shamans. These individuals were then able to serve as spiritual advisors and healers (Choquette and Holstine, 1980). Shamans who had divinatory powers might also serve as seasonal or economic chiefs.

The Kootenai were known to practice a form of sun worship (Boas, 1890, and Curtiss, 1911). According to Turney-High (1941), the most important religious ceremony was the sun dance. Other important religious events included the midwinter festival and the grizzly bear dance.

The Kootenai have a strong sense of aversion toward the dead. This fact was noted by Alexander Chamberlin who was unable to obtain any osteological material (Chamberlin, 1892). Turney-High (1941) mentions both flexed and extended burials. Chamberlin (1892) recorded two ways that the Kootenai disposed of their dead: 1) burials in open shallow holes amidst rocks; or 2) burials placed in areas that were subject to inundation by high water.

Archeological manifestations that may be encountered that relate to vision quest ceremonials or burial practices are discussed elsewhere.

7. External Relations

Relations between the Kootenai and their neighbors have not always been friendly (Chamberlin, 1892, Curtiss, 1911, and Hudson, et al., 1981). Most researchers mentioned the traditional animosity between the Kootenai and Blackfoot tribes. It is known that the Kootenai had hostile relations with the Blackfoot through the first half of the nineteenth century (Johnson, 1969). However, Chance (1981) notes that hostilities would occasionally cease, and the Blackfoot would trade in Kootenai territory. Kootenai relations with groups to the west appeared to have improved after A.D. 1800 (Hudson, et al., 1981:86). This is generally attributed to a need for protection against the Blackfoot during bison hunting excursions onto the Plains.

8. History; Prehistoric Periods - A.D. 1855

There is some suggestion that the Kootenai may have occupied their home range for as much as 3000 years (Reeves, 1978, and Choquette and Holstine, 1980). Hewes (1948) suggests that the Blackfoot/Kootenai dichotomy extends back at least 400 years. Reeves (1978) suggests an even greater time depth of 800 years. The Kootenai seemed to have developed a settlement and subsistence pattern early on and maintained it for some time (Roll and Henry, 1982). There is no reason, however, to assume the Kootenai "lagged" behind in accepting either the bow and arrow or the horse.

Schaeffer (1982) maintains that the traditional view of the Kootenai being forced westward by the Blackfoot in the eighteenth century is inaccurate. He attributes the westward move to an early smallpox epidemic in the 1730's. A second smallpox epidemic in 1780-1781 appears to have had a devastating effect on the tribe (Boas, 1918). By this time, both the horse and in all likelihood a limited number of European trade goods would have been present.

The initial white contact was made with early fur traders and explorers along the east slope of the Rocky Mountains. The Kootenai had been unsuccessful in gaining access to trading posts established on the Saskatchewan River until the late eighteenth/early nineteenth century. David Thompson crossed the Rocky Mountains and soon afterward established a series of trading posts in western Montana. Prior to this, Thompson had two men named LeBlanc and LaGasse winter with the Kootenai. The observations of either of the two do not appear to have been recorded, and it appears the Kootenai may have killed the two traders for suspected treachery with the Blackfoot (Schaeffer, 1966). During the first part of the nineteenth century, Joseph Howse of the Hudson's Bay Company was also present. However, his stay was brief with the "Bay," not returning to the area

until after their consolidation with the Northwest Company (Braunberger and White, 1964).

The extent, economic impact, etc., of the Kootenai fur trade are beyond the scope of this work, but have recently been summarized by David Chance (Chance, 1981). The fur trade was the dominant industry for most of the period between 1800-1855. During this time, the Kootenai band near Libby-Jennings moved south to the vicinity of Flathead Lake. Jesuit missionaries also appeared during the later portions (1840's) of this period. However, no staffed missions were located among the Kootenai.

The Kootenai were participants in the 1855 Stevens Treaty. However, not all of the Kootenai were pleased with the settlement in the treaty. Some moved to Canada, others became nontreaty Indians, while those who accepted the treaty settled around the north end of Flathead Lake where they are located today.

B. Flathead and Pen d'Oreille

The Flathead and Pen d'Oreille occupied much of the area covered by the two Forests. Teit (1930) includes both groups in a larger unit which he calls the Flathead group. Others have criticized Teit for this construct (Turney-High, 1937). The Flathead tribe itself remains fairly well reported in the ethnographic literature, while the Pen d'Oreille remain almost unknown. This chapter combines the two groups because of the lack of ethnographic literature and the probable close relation of the two.

1. Origin and Territory

Flathead origins are difficult to interpret from the literature. There are at least three different suggestions to Flathead origins. These are: 1) the tribe originated somewhere in Oregon and moved eastward over the Snake and Clearwater Rivers, and finally over Lolo Pass into the Bitterroot Valley (Turney-High, 1937); 2) the tribe at one time was divided into bands living principally east of the Continental Divide and were forced back over the divide by the Blackfoot and Shoshone (Teit, 1930, and Malouf, 1956a); and 3) the Flathead have never lived anywhere other than the Bitterroot Valley (Curtis, 1911:44).

Where the Pen d'Oreille came from remains vague. Teit (1930:21) suggests a westward movement of the group at some vague point in time. The tribe would have become divided into the two divisions sometime later. Hudson, et al. (1981:51) has estimated this may have happened as late as 250 B.P.

The territory which the Flathead occupied appears quite variable. Teit (1930) described their territory as being entirely east of the Continental Divide. This area included most of the Missouri headwaters and may have extended as far east as the Musselshell River. Teit (1930:304) suggests this territory was occupied after the arrival of the horse. The Flathead were living as a single group in the Bitterroot Valley when white contact was made.

Pen d'Oreille territory extended throughout much of western Montana. It extended as far north as Flathead Lake, south to the Bitterroot Valley, and westward along the Clark Fork River. It is possible, if not probable, that the Pen d'Oreille territory may have once extended onto the Plains. Hudson, et al. (1981), places the dividing line between the upper and lower Pen d'Oreille somewhere in the vicinity of Plains, Montana.

2. Settlement and Subsistence

The Flathead economic system was geared toward the procurement of bison, although in protohistoric times they apparently paid dearly for this. While in the Bitterroot Valley, the Flathead exploited a number of local game animals including deer, elk, and antelope (Turney-High, 1937). Turney-High (ibid.) states that antelope were procured only individually, while the other two animals were hunted communally. There is some evidence to support this in the form of pits in talus slopes along the Montana/Idaho State line that are believed to be related to communal hunting practices (Fredlund and LaCombe, 1971, LaCombe, n.d.) These pits, however, cannot be related to any one ethnographic group. The Montana/Idaho State line could easily have been used by such groups as the Shoshone, Nezperce, Pen d'Oreille, Coeur d'Alene, as well as the Flathead during the Prehistoric Periods (Hogan, 1974:103). In addition to

meat procurement, the Flathead exploited a variety of berries and roots. Both Turney-High (1937) and Schaeffer (n.d., unpublished field notes) mention the Flathead crossing the Bitterroot Mountains to exploit the salmon runs on the western slope. Some root crops such as camas appear to occur in Flathead aboriginal territory in patches large enough to be economically important to their diet (Malouf, 1979).

Pen d'Oreille subsistence appears to be oriented toward the exploitation of local game populations and riverine resources. Fishing was more important among the lower Pen d'Oreille than the upper. Hudson, et al. (1981:65) suggests that while hunting was continual, it was secondary to fishing. After the adoption of the horse, bison hunting became more important than it had been previously. This change affected the upper Pen d'Oreille more than the lower. The Pen d'Oreille also used shellfish, though this was more by choice than by necessity (Teit, 1930:345). Caribou were hunted, but the importance that they played in the diet remains to be demonstrated. A number of root crops, particularly camas, were also eaten.

Flathead settlement patterns were closely linked to the procurement of various resources throughout the year. By the period of white contact, the bulk of the Flathead could be found wintering on the Plains, particularly on the upper Musselshell River (Turney-High, 1937:117). A smaller group (including the elderly) remained in the Bitterroot Valley. This group was in semi-permanent villages. In all likelihood, these sites have been destroyed by subsequent modern agricultural practices. Smaller camps were utilized when engaged in other subsistence activities. Most of these would probably relate to late summer/early fall occupations in upland areas.

The Pen d'Oreille settlement pattern was one of large nuclear areas and associated satellite camps. The nuclear areas were mostly winter villages (Hudson, et al., 1981:66-68). Satellite camps were most often associated with seasonal subsistence activities. Prior to the introduction of the horse, there may have been a westward shift to exploit camas during the summer, followed by an eastward population shift during the winter. It is likely that the more mountainous areas were exploited as they became accessible with the spring snow melt.

3. Material Culture

The Flathead by the time of white contact had adapted their material culture to the procurement of bison. The Flathead admit to using "flint arrowheads," going so far as to identify certain point types as being Salish (Turney-High, 1937). They also admit to using bone projectile points, but felt these were expediency tools rather than their primary point type (Turney-High, 1937). The Flathead made a variety of bows ranging from simple wooden ones to the preferred composite bow of mountain sheephorn. They also possessed a full range of fishing equipment including three-pronged harpoons and a variety of fish traps (Turney-High, 1937). Turney-High (1937:127) notes that the Flathead used a simple palm-manipulated drill for fire making. He went on to note that this operation wore out about three people before a fire was started. Eating utensils were made out of wood, mountain sheep or goat horn. Unlike their northern neighbors the Kootenai, the Flathead did not appear to have made pottery aboriginally nor to have cultivated tobacco.

Pen d'Oreille material culture consists of stone implements (points, knives, scrapers, drills, pipes, pestles, hammerstones, and mauls), a weakly developed bone and wood industry (Hudson, et al., 1981), and a well developed cedar bark basketry industry. Woven tule mats and woven clothing of both animal skin and vegetable fiber were produced (Teit, 1930:327). The Pen d'Oreille produced large musselshell earrings from which they received their name from early trappers.

4. Housing and Transportation

Flathead housing has changed through time. Most likely, the aboriginal style of Flathead housing was a simple mat-covered lodge. This house form was later supplanted by the skin covered lodge (teepee). Turney-High (1937:97) described a large communal mat-covered lodge in addition to the two types mentioned above. A degenerate form of the communal lodge was used for ceremonies during later times. Canvas has replaced the brush covering of the degenerate communal type. Teit (1930) described a "circular house" with a roof of poles that served as a shade house during the summer. Pit houses do not appear to be present. This is confirmed to date by their apparent absence in archeological excavations in western Montana.

Pen d'Oreille housing is similar to that of the Flathead except for the presence of bark covered lodges. Teit (1930) notes that these sometimes were elevated to avoid fleas. Hudson, et al. (1981:69) states there may have been earth lodges, but these would have been of some age.

Both the Flathead and Pen d'Oreille used similar transportation systems. The Pen d'Oreille, however, may have been more river oriented than the Flathead. Prior to the introduction of the horse, both groups were pedestrian. It is probable that both groups were more sedentary at that time. Both groups used dogs as pack animals, but not as draft animals. Both used water transportation although there are differences between them. The Pen d'Oreille used a bark canoe that had a blunt end, squared off and sewn together. The Flathead also used a bark canoe and the Plains bull boat (Ray, 1939:144). Teit (1930) and Ray (1939:144) suggest that the use of undercut birch bark canoes was an innovation introduced by Iroquois Indians who had settled in the vicinity of Flathead Lake during the fur trade era.

The Flathead received the horse sometime around 1730 (Malouf, 1967). Although it is unknown exactly when the Pen d'Oreille received the horse, it was probably about the same time or slightly later than the Flathead. The horse was responsible for a number of substantial changes in the life-styles of both groups. Turney-High (1937) points out that the Flathead horse complex shows its origins from the Shoshone.

5. Social Organization

Flathead social organization is difficult to assess. There may have at one time been a number of bands (Teit, 1930); however, by the time of contact, most of the tribe was concentrated in the Bitterroot Valley. The Flathead chieftainship was considered hereditary except under extraordinary conditions (Turney- High, 1937). In addition to the primary chief, there was a series of lesser chiefs whose roles were more like "bosses" (Turney- High, 1937:51). Teit (1930) lists six of these. Teit (1930:375) suggested that in some cases the lesser chiefs may have represented former band chiefs. Also, female chiefs appear to have been absent (Teit, 1930). Teit was unable to document any specialized societies such as those found among Plains' tribes.

Turney-High (1937:46) found one group called the "grabbers," which formed an internal and informal police force. Membership was by chiefly appointment, and members were not able to punish offenders. Punishment, consisting of whippings and reprimands, was conducted by the chief.

The Flathead traced their descent matrilineally (Turney-High, 1937), although the patrilineage was considered equally important. Polygamy was accepted, but monagamy was the general rule, at least prehistorically. Slavery was practiced as a result of warfare, but not on an economic basis. Turney-High describes the slave's lot as not being an admirable one (1937:129-132).

Pen d'Oreille social organization consisted of a number of bands. The bands were made up of a small number of families who by tradition and family ties wintered together (Hudson, et al., 1981). Teit (1930:376) stated that there were formerly six bands of Pen d'Oreille. He also stated that there were six chiefs: one head chief, a subchief, and four small chiefs. The chieftanship was not strictly hereditary. Chiefly powers were primarily advisory and concerned hunting, fishing, and the distribution of the catch. There was a distinct sexual division of labor (Hudson, et al., 1981:70). Slavery was present, but never became prevalent among the Pen d'Oreille. Intergroup marriage was present; however, the extent to which intertribal marriage was practiced was not discussed. Hudson, et al. (1981:70), notes that intertribal marriages between groups cement relations between them.

6. Religion

Both the Flathead and Pen d'Oreille shared similar religious beliefs. Teit (1930:383) says that the Flathead group (including the Flathead and Pen d'Oreille) prayed to a supreme diety, A mo' tk en. This particular diety was seen to be beneficial to people. Another diety, Amte' p, who was considered the source of evil, was not prayed to.

There was a belief in dwarfs and giants. Turney-High (1937:13-15) discusses the occurrence among the Flathead. These were not supernatural beings, but they did possess remarkable power and/or awesome strength. Turney-High (1937) suggested that Teit's (1930) foolish folk (semtuse) are more a fictional people than an actual band. Choquette and Holstine (1982) note that a variety of spirits haunted certain lakes and parts of mountains. Offerings were left to supplicate these spirits to keep people from harm when in their vicinity.

The guardian spirit was sought at puberty by both sexes in both groups. A long course in training was required (Teit, 1930:384). Songs were also sought at this time. Shamans were important (Teit, 1930, Turney-High, 1937). Also important were seers who could see into the future. A shaman's powers were determined by the individual guardian spirit.

The entire tribe would assemble during the midsummer and midwinter months, and whether or not this occurred during the prehistoric periods is currently unknown. Teit (1930) also describes a number of social dances, the Plains' Sun Dance does not appear to have been practiced. Turney-High (1937) sees a strong link to the Northwest Coast in the bluejay dance.

Flathead and Pen d'Oreille burial practices were similar to those followed by other Salish tribes. Teit (1930:382-383) describes several different burial methods, although Turney-High (1937:141-142) states that the Flathead practiced only inhumation. Both Turney-High (1937) and Teit (1930) note that the dead were buried immediately when in unfamiliar territory, and attempts were made to disguise the grave.

7. External Relations

Both the Flathead and Pen d'Oreille appear to have maintained friendly relations with most other Salish groups to the west. The Flathead also traded with the Nez Perce, who in proto-historic and early-historic times (1750-1850) would accompany them on bison hunting trips to the Plains (Curtis, 1911, and Turney-High, 1937). Pen d'Oreille relations with the Kootenai were hostile until the mid-1800's and occasionally there were hostile relations with the Shoshone and the Coeur d'Alene (Hudson, et al., 1981, Schaeffer, 1982:8, Turney-High, 1937). The most serious threat to both the Pen d'Oreille and Flathead were the Blackfoot. The adverse effect the Blackfoot had on the Flathead was noted by many early travelers. The Blackfoot forced the Flathead to take refuge among the Shoshone in the mountainous area south of the Bitterroot Valley. The Flathead also had problems with other Plains' tribes; as Turney-High (1937:122) noted, the "Flathead had no friends on the prairie." However, when large intertribal hunts were organized, the Flathead were generally in charge.

8. History

Archeologists have yet to determine when the Flathead entered their aboriginal territory. Fahey (1974) suggests that they reached their present territory some time prior to the introduction of the horse, perhaps during the sixteenth or seventeenth century (cf. Teit, 1930). Others would suggest that this date may be too late (Choquette and Holstine, 1982). There is some suggestion of linquistic divergence among Salishian languages about 1500 B.P. (Hudson, et al., 1981).

Even less is known of the time the Pen d'Oreille began to occupy their territory. There is some suggestion that the Pen d'Oreille and Kalispell split may have happened as late as 250 B.P. (Hudson, et al., 1981:61). This would suggest that the Pen d'Oreille may not have been recognized as a distinct group until quite late.

The life style of both groups probably changed little until the introduction of the horse. When the horse was introduced in the first half of the eighteenth century, it created a radical change in their life styles and mobility.

Although it is possible that the Flatheads may have had earlier contact with whites (Fahey, 1974:27-28), the first sustained contact was with Lewis and Clark. In the next several decades, the Flathead were participants in the fur trade. Several trading posts were established to cater to them as well as the needs of other nearby tribes. They did not participate as actively in the fur trades as either the Kootenai or Pen d'Oreille, however (Fahey, 1974). One important result of the fur trade was the introduction of eastern "Christianized" Indians among the Flathead. The outsiders succeeded in arousing the Flathead's interest in Christianity and their desire for the power of the "Blackrobes." This resulted in several groups of Native Americans making their way to St. Louis to plead for missionaries. A good deal has been written about the Flathead apostasy (Forbis, 1951), much more than can be dealt with here. Suffice it to say that while the Flatheads were successful, they were also disillusioned by the missionaries' emphasis on peace with their enemies, as well as the suppression of some traditional values such as polygyngard ceremonial whippings.

By the 1855 Stevens Treaty, the Flathead were living as one group in the southern Bitterroot Valley. This treaty triggered the end of the aboriginal way of life.

The Pen d'Oreille acquired the horse shortly after the Flathead. Initial white contact with the Pen d'Oreille was made in 1809 by David Thompson of the Northwest Company. The Pen d'Oreille were fairly active in the fur trade; primarily because the trading posts in the region were located in their territory. The Pen d'Oreille were also influenced by "Christian" Indians brought in by the fur trade.

By the time of the 1855 Stevens Treaty, a good number of the Pen d'Oreille were living in the vicinity of the recently built St. Ignatius Mission. Although none of the parties were happy with the Stevens Treaty, the area chosen for the reservation fell partially in the Pen d'Oreille territory so there was no forced removal, as was the case with the Flatheads, nor did they cross over the Canadian border as did some Kootenai.

C. Nez Perce

The Nez Perce are a well studied group in American anthropology, although most people associate the Nez Perce with Chief Joseph during the Nez Perce War of 1877. There is much more to the Nez Perce than this single event. It is fortunate that early ethnographers, such as Curtis (1911) and Spinden (1908), were able to capture a good deal of their lifeway. More recent studies have discussed such topics as settlement (Schwede, 1966), subsistence (Marshall, 1977), religion (Walker, 1968), and trails (Shawley, 1977).

1. Origin and Territory

Spinden (1908) states that the Nez Perce had no cosmogonic myths, nor were there any traditions of migration. He went on to note that the tribe appeared to have dwelt within the boundaries from time beyond memory.

The aboriginal territory of the Nez Perce was extensive, covering some 27000 square miles. This territory was between the west slope of the Bitterroot Mountains in the east and the Blue Mountains on the west. The environment encompassed by this territory was quite varied containing deep canyons, sections of the unforested Columbia Plateau, and high mountains (Hudson, et al., 1981:36). The territory was subdivided into a number of smaller units, each occupied by a distinct and separate band (Curtis, 1911).

2. Settlement and Subsistence

Schwede (1970) divides Nez Perce settlement patterns into two types: villages and camps. Villages are defined as "a group of people living perennially in a named geographical area which they are thought to own through a vested interest in the area, regardless of temporary absence by village members." Camps were defined as "a group of people living on a seasonal basis in a named geographical area which they are thought to use by usufruct." Earlier, Schwede (1966), using ethnographic and historical information, had constructed a "master list" of 295 Nez Perce settlement locations, although she notes (1970:130) that the actual number of camps cannot be ascertained. Nez Perce village locations are highly predictable (Schwede, 1970) because they are dependent upon resource availability and elevation. Spinden (1908:175) noted that village sites were usually situated on alluvial fans or bars along tributaries to the major rivers. Access to early spring root crops and later pasture for horses was also important in locating village sites. Root crops may have played an important part in the development of villages (Ames and Marshall, 1980). Spinden (1908) suggested that village sites would not extend any further east than the western limits of Lemhi County, Idaho. Ames and Marshall (1980) discuss several different types of camps. They note camps are found at all elevations in Nez Perce territory, whereas villages are restricted to canyons. Camps could contain family groups clustered into large population aggregations or fairly small family groups. The abundance of particular plant resources seems to be the controlling factor in camp size, as the season the plant becomes available is the major factor in camp location (Ames and Marshall, 1980:33).

The Nez Perce subsistence cycle was closely linked to the environment. This called for scheduling that was dependent upon the availability of resources. The key to Nez Perce subsistence activities appeared to be the presence of plants that were found in large enough quantities to be economically

exploitable. Ames and Marshall (1980) note that the plant productivity varies from year to year and is not a reliable resource. Although fishing was important to Nez Perce subsistence, Ames and Marshall (1980:34) note that it allowed flexibility in scheduling other resource procurement activities. A variety of big-game animals was hunted, probably in conjunction with seasonal procurement of various plant resources. Schwede (1970) suggests that while fishing may have been a year-round activity, fish could be procured in great numbers only in the spring and fall. Spinden (1908) also mentioned the use of lichen, the cambium layer of certain trees, and ponderosa pine nuts which are described as famine foods.

Travel to the Plains to hunt bison appears to be a post-horse adaptation (Curtis, 1911), although according to Anastasio (1972), meat was rarely brought back. This trip could last several years and may have involved as much as one-fifth of the total Nez Perce population (Hudson, et al., 1981:43).

3. Material Culture

The material culture of the Nez Perce was similar to that of other groups on the interior Columbia Plateau. A variety of chipped stone tools (arrowheads, knives, scrapers, etc.), ground stone tools (mortars, pestle, etc.), and bone tools (elk antler wedges, mountain sheephorn bows, whistles, gaming pieces, fish spears, etc.) were made. A number of basketry items were produced, particularly a flat carrying basket called a wallet. This type of basket was an eagerly sought trade item by the Flathead (Turney- High, 1937). Nez Perce dress resembled the typical Plains style, although the Nez Perce also sought clothing made by the mountain dwelling Shoshone (Lilijeblad, 1957). Woven fez-shaped caps were worn by women (Spinden, 1908). A type of hide armor was used during warfare (Spinden, 1908). The use of armor was abandoned after the adoption of the horse. Rattlesnake poison was sometimes used on arrow tips for hunting big game (Hudson, et al., 1981:42). Both sexes used ornaments, although males appeared to have made greater use of them. Tattooing was unknown (Spinden, 1908).

4. Housing and Transportation

Spinden (1908) defines five types of structures among the Nez Perce:

(1) The Long House: This structure was shaped like an A-frame tent and approximately 50 to 80 feet in length and averaged 18 feet in width. This served as a communal lodge.

(2) Teepee Lodges: These structures were either mat or skin covered. Occasionally, they were sunk into the ground during the winter. The skin covering may be a recent introduction.

(3) Menstrual Lodges: These type of structures were circular, 20 feet across, and 5 or 6 feet in depth. This type of structure was used only by women, and most often during the winter when the group was likely to be more sedentary.

(4) Sudatory Lodges: These structures were circular excavations, approximately 3 feet in depth, and 10 to 12 feet in diameter. Poles were laid across level with the ground and covered by rye grass, then covered

with several inches of earth. These structures were used only by boys older than 14 years and unmarried men. These structures were always located on the banks of streams so the occupants could avail themselves to a sweat bath if they so desired.

(5) Sweat Houses: These structures were constructed on the banks of streams for use by either men or women. They were of two types: 1) temporary ones which were constructed of a willow frame and the bather's blanket; and 2) the more permanent ones which were also constructed of a willow frame, but covered with sod and grass.

Also present in villages was a dance floor located outside the residential area. It was sometimes covered with a temporary mat lodge (Hudson, et al., 1981:46).

Prior to the introduction of the horse, the Nez Perce traveled either on foot or by dugout canoe. Although they used the dog, it was used mostly as a pack animal. The horse was similarly used after its adoption. The travois may have been used; Wildesen (1982), and Spinden (1908) noted that by the time of white contact, the use of canoes was declining. Spinden (1908) felt that the horse may have been introduced among Nez Perce slightly earlier than among the Plains tribes. The use of the horse increased the complexity of the trail network (Shawley, 1977), but also allowed the population to expand onto the Plains to participate in the bison hunt.

5. Social Organization

The word tribe as it relates to Nez Perce social organization is perhaps a misnomer. Ames and Marshall (1980) suggest that the Nez Perce amalgamated into a tribal entity as a response to Euro-American pressures and influences such as the horse. The Nez Perce participation in the Plains buffalo hunting economy during the Proto-Historic and Early-Historic periods (A.D. 1730-1855) would have triggered the need for a more complex social organization. Before this time, the term Nez Perce was based on language rather than political or territorial criteria (Ames and Marshall, 1980:25-29).

A number of bands which are identified with villages in linear settlement patterns were present. Sometimes, several bands might be loosely associated in composite bands (Walker, 1972). Village autonomy and a strong degree of localism was present, and the degree of localism was important in shifting the political fortunes of leaders. This was probably more important during the prehistoric periods (before 1730) than during historic times.

Each village had a head man and council. Each band had a leader who was also the leader of the most prominent village. In the case of composite bands, the council was made up of band leaders. A leader was obligated to care for anyone living in the geographic realm of his power and influence. Prominent warriors could be elected as temporary chiefs as, and if, the need arose. All leaders were elected, although most positions were also semihereditary (Hudson, et al., 1981:49). According to Spinden (1908:249), there were no secret societies. Walker (1978 cited in Wildesen, 1982:35) suggests that the Nez Perce had bilateral kinship, primarily patrilocal residences and communities rarely larger than 100 people.

6. Religion

Nez Perce religion has been described as simplicity, rationality, and freedom from ceremonial restraint (Spinden, 1908). As is the case with most tribes in the area, the Nez Perce practiced an animistic, Shaman-centered religion with emphasis on the individual quest for supernatural power (Walker, 1978, cited in Hudson, et al., 1981:49). Tutelary sought during vision quests gave power to the individual by supernaturally supporting his/her abilities. Power was made evident in outstanding character traits and skills (Hudson, et al., ibid.). Associated with tutelary spirits is the vision quest. Nez Perce vision quest structures have been described as:

Already prepared for the future..., they consist of piles of stone about 2 feet high, arcs of circles, one with the opening to the east, another to the west, and a third to the south. (Curtiss, 1911:63)

They have also been described as U-shaped structures opening on the east (Hudson, et al., 1981:51). These are most often found in high isolated areas near traditional campgrounds.

A variety of dances was held by the Nez Perce (Hudson, et al., 1981). The most important of these was the guardian spirit dance (Spinden, 1908). The Nez Perce were among those western tribes that actively sought the power of the Blackrobes (Spinden, 1908). However, their reasons for seeking them were similar to that of the Flathead.

Nez Perce burials are located on the first bench above the river if near a village, or in rockslides (Hudson, et al., 1981:51). They were often marked by cairns, though not in all cases (Spinden, 1908). Spinden (1908:182) described a grave that contained, in addition to the corpse, a horse corpse, various grave goods, and partly burned cedar stakes above them. Teit (1930:175-176) described Nez Perce burial practices as being similar to the Coeur d'Alene, except that the Nez Perce would paint the face of their dead. Also, they made greater use of grave goods. Hudson, et al. (1981:51), cite several reports that discuss Nez Perce burials in greater detail.

7. External Relations

The Nez Perce were involved with several intergroup relations. They allowed "co-use" of some resources, particularly camas. They were also found at large gatherings on the main Columbia River (Hudson, et al., 1981:54). The Nez Perce, at various times, were at war with neighboring groups. Teit (1930:125) noted that the Nez Perce had more wars with the Coeur d'Alene than any other group. These, however, were infrequent. Although the Nez Perce raided western Salish tribes (Hudson, et al., 1981:55), relations with eastern Salish tribes such as the Flathead remained on amiable terms.

The Nez Perce would also raid south into Shoshone and Bannock territory (Spinden, 1908). Following the introduction of the horse, the Nez Perce came into conflict with the Blackfoot; this in turn forced them to ally with their former enemies, the Shoshone, when on the Plains seeking bison.

8. History

Most of what has been written about Nez Perce history is largely concerned with either the Nez Perce War of 1877 or their various dealings with whites from the time of Lewis and Clark on.

Just prior to contact in the late 1700's, the Nez Perce are thought to have been affected by epidemics. Hudson, et al. (1981:57), notes that this may have affected social structure and subsistence habits. Even prior to this, the horse must have had some influence on changing subsistence strategies.

The first sustained white contact was with Lewis and Clark in 1805. Shortly thereafter, white traders began to establish trading posts in the region, although the Nez Perce were not receptive to the fur trade (Waldbauer, et al., 1982:12). The Nez Perce actively sought missionaries, although they had Presbyterian missionaries at one point instead of the usual Catholic ones. Hudson, et al. (1981:58), notes that the missionaries brought the Nez Perce medicines, farming, mills, printing, and literacy along with religion. They also note that the missionaries caused factionalism in the tribe along Christian and traditional lines. The latter had ramifications in the establishment of the reservation and later dealings with whites. In addition, the missionaries also changed political and religious attitudes. Elders of the Presbyterian faction, for example, were recognized by the Federal government as the tribal government until the 1920's (Hudson, et al., 1981:59).

Efforts to place the Nez Perce on a reservation met with varying degrees of success since they continued to hunt buffalo on the Plains in the 1860's. The culmination of hostile Nez Perce/white relations was the Nez Perce War of 1877.

D. Northern Shoshone

The Shoshone are one of the most intensively studied Native American groups. Their life style has been used as a model by archeologists attempting to seek analogies in the archeological record. These analogies usually consist of applying the known social organization and subsistence strategies that existed at contact to interpreting similar facts from archeological sites of earlier periods. (Thomas, 1973, is perhaps the best example of this.) However, Butler using material from southern Idaho has questioned this example (Butler, 1981a). This section focuses on one group; the Northern Shoshone (specifically, the Lemhi and Sheepeater). Both of these groups made use of the southern margins of the Bitterroot National Forest.

1. Origin and Territory

Most authors think the Shoshone were probably recent arrivals to the area (Malouf, 1967, Wright, 1978, and Butler, 1981a,b). Others, however, think that the Shoshone (or their precursors) may have occupied the area for over 8000 years (Swanson, 1972). The logical evidence would seem to support the former argument, i.e., the Shoshone being recent arrivals. The reason for the difference in interpretation between Butler and Swanson might be due to misinterpretation of projectile point styles (Butler, 1981a:11). Butler (1981b:254) has suggested that people before this time exhibited a strong plains orientation. Rossillon (1982) quoting Butler, suggested the local inhabitants may have simply added some new culture traits and blended in with the more recent arrivals. Most authors estimate the Shoshone's arrival sometime between A.D. 1600-1800.

The extent of northern Shoshone territory is difficult to assess. Steward (1938:139) estimated the northern Shoshone aboriginal territory at 27000 square miles. This territory was in southwest Montana, northwest Wyoming, and the eastern portions of north central Idaho. Steward (ibid.:186) also places some of this group in western Montana. This suggestion is supported by the presence of pictographs with styles attributed to the Shoshone in the southern Bitterroot Valley (Keyser, 1975, and Keyser and Knight, 1976). Following the introduction of the horse, the Shoshone may have controlled considerably more territory, extending as far north as the Milk River in Canada. They were forced back into their historic territory by the Blackfoot as the latter was pushed further and further west (Malouf, 1967).

2. Settlement and Subsistence

Steward (1938:187-189) describes northern Shoshone settlement patterns as one of fairly large villages on the Lemhi River and smaller villages isolated in the mountains. Steward lists nine such village sites. The smaller encampments allowed less pressure on resources in the area. The Tukudeka (bands) would winter in groups, but disperse throughout the Salmon River area during the summer (Hultkrantz, 1961:27). Murphy and Murphy (1960:332) note that following the introduction of the horse, winter camps were not "tightly nucleated" in order to prevent game in the area from becoming exhausted. The overall picture of settlement patterns is one of seasonal movement to exploit a maximum number of resources throughout the year.

Northern Shoshone subsistence was prehistorically based on fishing, hunting, and gathering. Steward (1938:1890-192) and Liljeblad (1957:95-97) discuss subsistence items found among the northern Shoshone groups. Important animals include big-horn sheep, elk, deer, and salmon. Liljeblad also notes that the Tukudeka (Sheepeater) had few food taboos, eating bear, coyote, and mountain lion. Fishing was conducted on smaller streams, but not on the main Salmon River because of its depth (Murphy and Murphy, 1960:331). Liljeblad (1957:96) also notes the use of a number of plant resources including limber pine seeds. Both Liljeblad (1957) and Dominick (1964) note the use of dogs as aids in hunting. Most subsistence activities were limited to small groups or individuals; therefore, activities that demanded collective participation such as fishing never became dominant. Although this changed for the Lemhi after the introduction of the horse and participation in the bison hunt. Steward (1938:92) noted that given the resources available, famine was not uncommon. Liljeblad (1957:95) notes that to the contrary, the Sheepeaters were much better off than other Shoshone groups, even to the point that they could exclude grasshoppers from their diet (ibid.:96).

3. Material Culture

Dominick (1964:153-156) describes some aspects of material culture among the "Sheepeater" northern Shoshone. He noted the use of steatite and clay pots, woven sage brush baskets, woven rabbit skin blankets, animal skins for clothing and moccasins, bows of mountain sheep horn, and a variety of chipped stone which would have been used both for artifacts and trade. The use of chipped stone continued up through historic times. Because of the nomadic lifestyle, heavy objects were cached for reuse. Both the mountain sheep horn bow and clothes were trade items in great demand by other groups (Liljeblad, 1957:98).

Other northern Shoshone groups would have utilized a similar set of material culture with the addition of a more extensive inventory of fishing equipment. This would have included hooks, baskets, dams, weirs, and harpoons (Steward 1938:205, Rossilon 1982). The Shosone were among the first tribes to receive the horse, which they acquired from the Spanish (Steward 1938:188). The various accouterments associated with the horse were modeled after Spanish examples.

4. Housing and Transportation

Several styles of housing were in use among the Northern Shoshone. These included standing timbered lodges and hide-covered lodges, although the type of hide which covered the lodge varied (Dominick, 1964, 163-164). The standing timbered lodges were covered with pine boughs in shingle fashion, and this was typical of all Shoshone groups (Lowie, 1924). The standing remains of these lodges have been found in Yellowstone National Park (Taylor, 1964) and southwest Montana (Davis, 1976). In later times, the Shoshone were known to have used the typical Plains' style teepee. One author (Grasspointer, 1980) has suggested that the number of stone circles at some sites may indicate Shoshonean occupations.

Transportation was mostly pedestrian. The population would carry their possessions in woven baskets. The eastern portion of the population also used dogs both for packing and pulling travois (Murphy and Murphy, 1960:310). According to Hultkrantz (1961:27), however, the dogs among the western mountain people were too small for packing or pulling and were used only for hunting.

Following the introduction of the horse, those without horses were generally referred to in derogatory terms. However, Liljeblad (1957:99) noted that for mountain groups it was to their advantage not to have horses since their presence would increase the potential for being raided.

5. Social Organization

The northern Shoshone were divided into two groups the Lemhi and the Tukdeka or Tukadika (Lilijebald, 1957:93-94). Both groups were known as Sheepeaters (Murphy and Murphy, 1960:309). Although there appear to be differences between the two groups, the exact nature of these differences remains unknown (Dominick, 1964:149). Hultkrantz noted:

> In a wider perspective, all mountain dwelling Tukudika in Idaho, southwestern Montana, and northwestern Wyoming made a block of groups with almost identical economic structure, but without any political or territorial unity. (1961:34)

This view is also supported by Liljeblad (1957:94). Hultkrantz (1961:34) went on to suggest that the Wyoming Sheepeaters might have been made up of a mix of "walkers" (prehorse Shoshone) and pauperized Plains' Shoshone driven into the mountains by other Plains' tribes.

Murphy and Murphy (1960:329) described the Lemhi as one of the most cohesive of all Shoshone groups. This is probably a post-horse adaptation to the bison hunt.

All of these groups were divided into small family units, which moved through the mountains under the direction of an old and experienced man to wherever the hunting was good (Liljeblad, 1957:100). During the winter, some groups would congregate in villages at fishing places on the rivers (Hultkrantz, 1961, Lilejbald, 1957). Steward (1938:187-188) equates the family groups with village locations in Idaho. Band size, particularly at winter encampments, would fluctuate from year to year (Lilejbald, 1957). The eastern (Wyoming) mountain people had little contact with other bands or other groups until fairly late. When trading, the mountain groups would travel in small parties to reduce the chance of being molested by their prospective customers (Lilejbald, 1957:99).

Chieftainship among the groups discussed here was not hereditary. Lewis and Clark noted that one became "chief" by prestige and example (Steward, 1938:193), although for the Lemhi, this position probably became more formalized because of the need for direction in bison hunting. For mountain groups, a man possessing the necessary qualifications and prestige would organize those activities that required some form of direction such as fishweir construction. Steward (1938:194) noted the presence of police societies among the Lemhi, but felt that these were probably recent introductions from the Plains.

Marriage was informal (Dominick, 1964:165). Steward (1938: 194-196) discusses several forms of marriage among the northern Shoshone. These were orthodox marriage, abduction, and by staying at a female's camp in the spring after others had left. Steward (ibid.) suggests that both polyandry and polygamy were practiced, although neither form was required. Steward noted that the essential feature of matrimony was the couple living together with some sense of

permanency. Liljeblad (1957) notes that most other surrounding tribes disapproved of the Sheepeater's practice of cross-cousin marriage.

According to Steward (1938:198), residence patterns were primarily matrilocal although these could change. Steward (ibid.) was unable to find any kinship avoidances. Murphy and Murphy (1960:334) note that while kinships were traced bilaterally, kinship ties were amorphous and weak.

6. Religion

Hultkrantz (1961:26) noted religion must have been "uncomplicated" and most likely fit that of later time. Characteristic was the belief in spirits of animal forms, which functioned as guardian spirits for the medicine man who saw them in visions.

Steward (1938:193) reported that the circle dance was held in various forms among the Sheepeaters' groups in the mountains. However, he also reported that it was not advantageous for the mountain dwellers to assemble in groups of any size. Occasionally, however, this might be excepted by people gathering at winter village sites or major fishing locations. Steward (1938) reported that the Lemhi had festivals of some size and importance, chief among these was the round dance. For the various other types of dances held, the leaders were those people with appropriate qualifications.

7. External Relations

The northern Shoshone groups varied between hostility and peace with the tribes surrounding them. Steward (1938:193) notes that small villages in the mountains did not actively participate in warfare. However, raids by the Blackfoot were an important factor in the amalgamation of the Lemhi. Liljeblad (1957) noted that the mountain Shoshone traded in only small groups because of the fear of being molested. Since the Nez Perce territory and Shoshone territory overlapped, the boundary perhaps needs to be better delineated (cf. Rossilon, 1982:50-51). Liljeblad (1957) noted that occasionally the Shoshone in the mountains would winter with the Nez Perce; however, he does not say whether this was done regularly or not. Raids by the Blackfoot occasionally forced the Lemhi into temporary alliances with the Nez Perce and Flathead for protection. Both Dominick (1964) and Hultkrantz (1961) mention that the mountain branch remained relatively isolated and were only vaguely reported by the early white travelers.

8. History to 1855

As noted in the "Origin and Territory" section, Butler (1981a:15) places the arrival of the Shoshone into southern Idaho at about (no earlier than) the middle of the sixteenth century and into the mountains no earlier than the beginning of the eighteenth century. Shortly after this time the Shoshone received the horse and began to expand their territory northward onto the Plains (Murphy and Murphy, 1960:295). However, by about A.D. 1750, the Blackfoot possessed sufficient numbers of guns and horses to begin to dominate the buffalo Plains east of the Continental Divide. By 1805 when Lewis and Clark arrived, the Blackfoot had pushed the Shoshone out of the Plains.

Lewis and Clark met the Lemhi in 1805. This was the first recorded contact with whites, although it is possible that earlier contacts were made (Steward, 1938,

and Murphy and Murphy, 1960). The story of Lewis and Clark and the Shoshone has been documented elsewhere (Devoto, 1953, Thwaites, 1906, etc.). It set a pattern of avoidance that was to be followed for the next 150 years (Wildesen, 1982:59). Fur traders moved through the area, but do not appear to have had any lasting effect on these people. In the late 1860's, gold brought the first major influx of whites into the Salmon River area. According to Liljeblad (1957), the traditional "bad press" about these people dates from this time.

Figure 13 shows the territorial range of native groups in the region from 1600 to 1855.

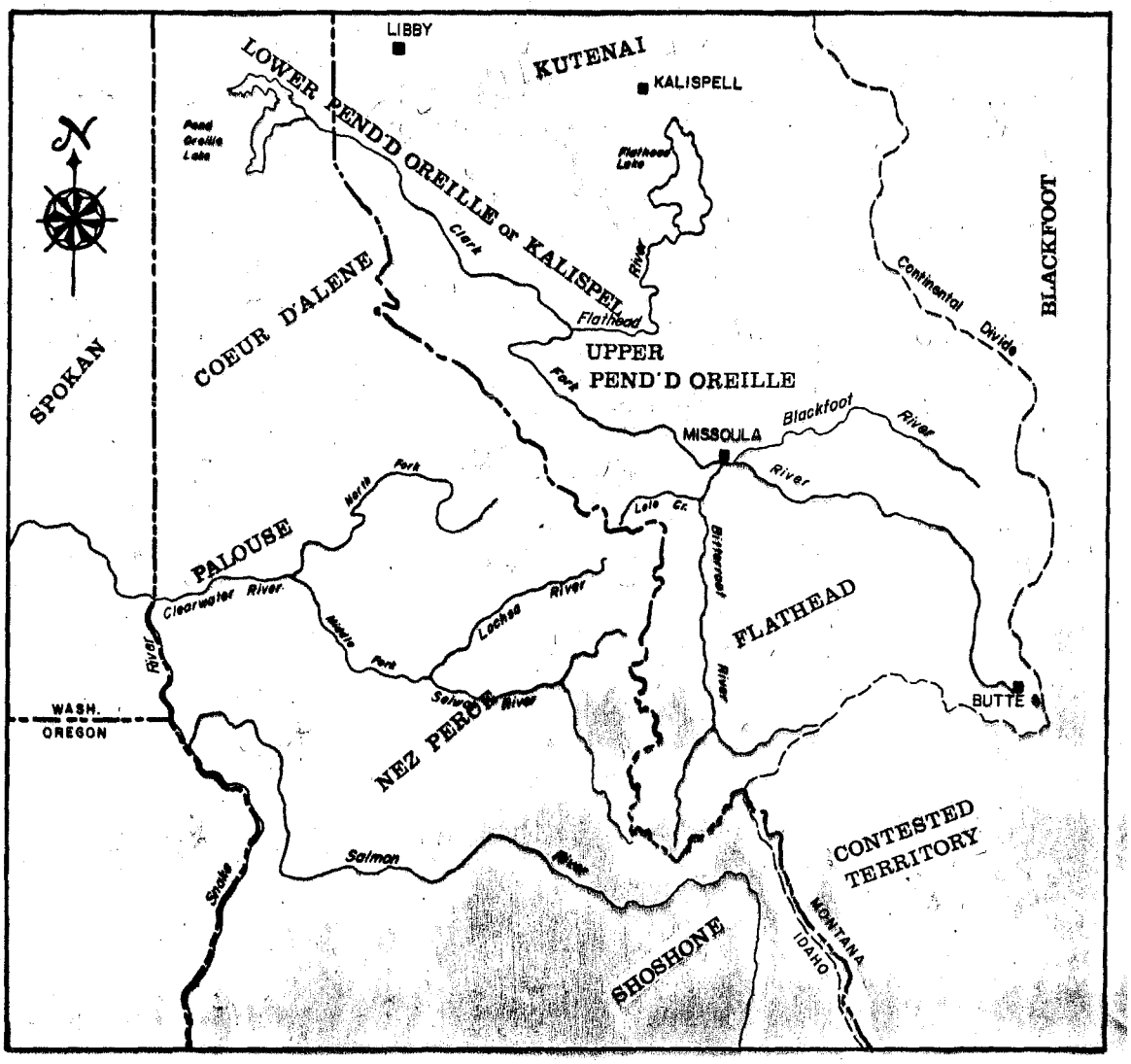


Figure 13

Generalized map showing location of historically identified Indian tribes on the Lolo and Bitterroot National Forests and surrounding areas. (Ca. 1850)

VIII. DISTINCT ARCHEOLOGICAL AREAS ON THE LOLO AND BITTERROOT NATIONAL FORESTS

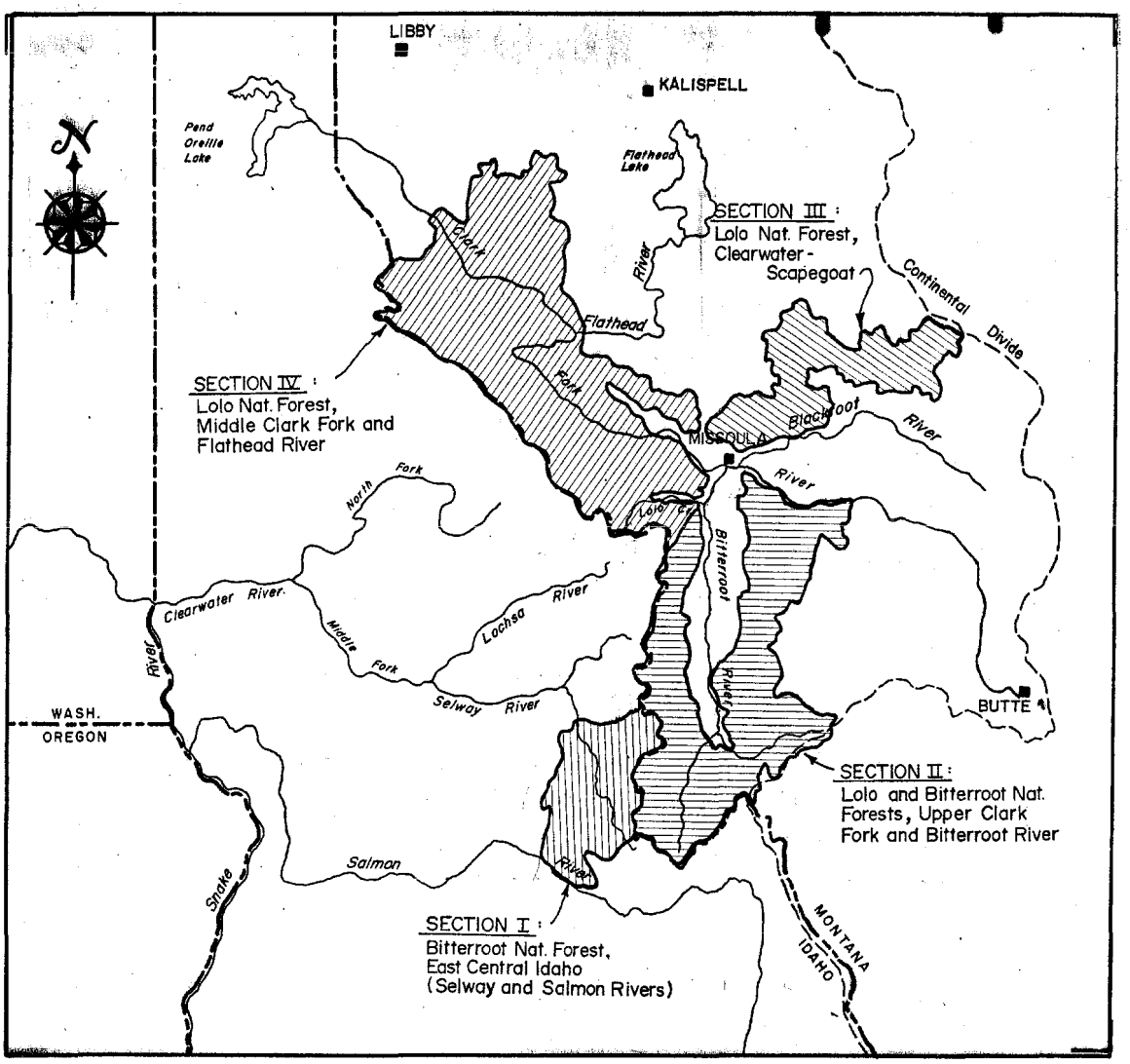


Figure 14 Map showing location of separate sections of study area.

A. Reasons for the Stratification of Areas

The Lolo and Bitterroot National Forests consist of approximately 5 million acres within western Montana and east-central Idaho. In the Early Historic period at least five separate groups were known to live on or utilize the lands within the study area. Consequently, a detailed discussion of the prehistory for both Forests is difficult without dividing the Forests into smaller more manageable units.

For this reason, the two Forests have been stratified into four distinct areas. The criteria to divide these areas is based upon several factors. These include ethnographic patterns and known tribal distributions, environmental factors such as major drainages or mountain ranges, as well as differences in known site types such as the presence of pit house villages in Idaho but not in Montana.

The four areas discussed in more intensive detail are as follows:

1. Section I (Selway and Salmon Rivers) - Includes all of those lands administered in Idaho by the Bitteroot National Forest. Basically, these are lands within the upper Selway drainage and along the main Salmon River.

2. Section II (Upper Clark Fork and Bitterroot Rivers) - Includes the lands in the Bitterroot Valley bordered on the west by the crest of the Bitterroot Range and on the east by the Continental and Bitterroot Sapphire Divides. Section II extends north to Lolo Creek and to the south bank of the Clark Fork River.

3. Section III (Clearwater and Blackfoot Rivers) - Includes those lands west of the Blackfoot River and adjacent (east and west) to the Clearwater River.

4. Section IV (Lower Clark Fork and Flathead Rivers) - Comprised of those lands west of Missoula, Montana, and drained by the Clark Fork, Flathead, and Thompson Rivers. The major ridge systems such as the Montana-Idaho State line along the crest of the Bitterroots and Reservation Divides create the south and east boundaries. The artificial National Forest boundaries form the northern and western boundaries of this study area.

B. Section I - Selway and Salmon Rivers

1. Introduction

The Idaho portion of the Bitterroot National Forest (Section I) lies on the north bank of the Salmon River between Range 11 and 14 East (Boise Meridian). The headwaters of the Selway River also begin within this area. Section I contains approximately 684 square miles, all of which is legally designated wilderness. The Selway Bitterroot Wilderness Area lies to the north and the River of No Return Wilderness Area to the south along the main Salmon River. One major Forest road bisects the area which travels west from Nez Perce Pass through Magruder Ranger Station to Elk City, Idaho. Several Forest Service lookouts and administrative sites also occur throughout the area. These facilities were constructed prior to wilderness designation and, with the exception of Magruder and Paradise Guard Stations, are no longer in use.

Because of the large amount of designated wilderness within Section I, very little man-caused disturbance has occurred, such as timber harvesting, road

construction, or other development. The area sees extensive use by recreationists during the fall hunting season and by white water rafters during the summer months along the Salmon and Selway Rivers.

Section I has received very limited archeological attention over the years, probably because of its isolation and difficult access. Also, the wilderness designation excludes activities that normally trigger cultural resource inventories such as timber sales. Nevertheless, some archeological work has been done, especially along the Salmon River in conjunction with the newly created River of No Return Wilderness Area and the specific direction for cultural resource management included within the 1980 Wilderness Bill (PL 96-312).

The first professional archeological work conducted within or near the Section I study area was by Dr. Earl Swanson in the late 1950's. Dr. Swanson, an archeologist from Idaho State University, conducted the first surveys along the Upper Salmon River. In the early 1960's, he excavated the Shoup rock shelter and accurately documented at least 8000 years of continuous occupation for the area (Swanson and Snead, 1966).

In 1969, the Bitterroot National Forest contracted Idaho State University to survey in the Magruder Corridor. This survey was part of the river study which was conducted prior to designation for the Selway as a wild and scenic river (Thomas and Turner, 1969). Shortly thereafter, in 1971, Richard Harrison conducted an intensive archeological inventory along both banks of the Salmon River. This investigation located 299 prehistoric sites between North Fork and Riggin, Idaho. It was also conducted as part of an overall study for wild and scenic river designation (Harrison, 1971).

Additional work has been conducted in recent years along the Salmon River and the Middle Fork of the Salmon River. The majority of this work has been sponsored by the USDA Forest Service in conjunction with the River of No Return Wilderness Area. This would include the overview written specifically for the River of No Return Wilderness Area entitled The Farthest Frontier of All (Wildeson, 1982); A Cultural Resource Overview of the Salmon National Forest (Rosillon, 1982); and "A Cultural Resource Reconnaissance of the Campgrounds on the Main Salmon River Corridor, 1982," (Price, 1982). Most currently (1984), Idaho State University Department of Anthropology conducted excavations at Corn Creek (10LH124) as part of an archeological field school. Also, the Zone Archeologist for the Lolo and Bitterroot National Forest conducted limited test excavations at six prehistoric sites within the Magruder Corridor along the Selway River during the 1984 field season. The purpose for these tests was to update and re-examine the data recorded during the initial 1969 inventory. The results of this project have been compiled into a formal report entitled, "An Examination and Test Excavation of Archeological Sites within the Magruder Corridor and Selway River Drainage, Bitterroot National Forest, Idaho County, Idaho," or SNAKES ALONG THE SELWAY (McLeod and Melton, 1984).

2. Environmental Setting

Section I of the study area lies north of the Salmon River between Horse Creek to the east and Sabe Creek to the west. The eastern boundary extends north approximately 42 miles along the west slope of the Bitterroot Mountains. The northern boundary extends west along the ridge system between Mt. Paloma (8371

feet elevation) and Elevator Mountain (4108 feet elevation) near the Selway River. The western boundary extends south from Elevator Mountain, crosses the Selway River and runs along Parachute Ridge, Three Prong Ridge to Sabe Saddle. Sabe Creek flows due south forming the western boundary where it terminates at its confluence with the main Salmon River. Section I contains approximately 684 square miles.

This section is drained by the Salmon River in the southern portion and by the Selway River in the northern part. The Salmon is a major tributary of the Snake River of the Columbia River System. The Selway, on the other hand, creates the Middle Fork of the Clearwater River when it joins the Lochsa River. The Clearwater River is also a major tributary of the Snake River of the Columbia River System. The two distinct drainge systems within Section I also create separate environmental areas. For this reason, the Salmon and Selway areas will be discussed separately.

a. Selway River (Magruder Corridor)

The area within the Selway drainage and the Magruder Corridor lies on the west slope of the Bitterroot Range and ranges in elevation from approximately 4000 feet above sea level near Paradise Guard Station to well over 8000 feet around the nearby peaks. Generally, the country is extremely rugged with steep slopes of 60 percent and more. The Selway River has cut a deep narrow canyon, therefore, travel is extremely difficult without the benefit of man-made roads and trails. Small benches and terraces are common where smaller tributaries enter the Selway River.

Vegetation is extremely diverse and consists of cedar, alder, and salmonberry near the Selway River. However, only a few yards away, dry open slopes and ponderosa pine may be common. Lodgepole pine and Douglas-fir are common timber types on north and west facing aspects.

Faunal resources within the Magruder Corridor include deer (mule deer and whitetail), elk, moose, bighorn sheep, mountain lion, black bear, and a variety of birds and small mammals as well as rattlesnakes. An anadromous fishery resource (salmon and steelhead) also occurs within the Selway River. However, in prehistoric times, Selway Falls may have impeded these fish runs.

Geothermal areas are also known to occur within the Little Clearwater Creek drainage, a tributary of the Selway River.

b. Salmon River

The main Salmon River Canyon from Corn Creek downstream to Little Sabe Creek is considerably lower in elevation than the Selway River within the Magruder Corridor. Elevations range from near 2800 feet above sea level near Corn Creek to well over 8000 feet along the Montana-Idaho Stateline only a few miles north. Temperatures along the river often rise well over 100 degrees fahrenheit during the summer months and drop well below freezing during the winter. Overall, the climate along the Salmon River is considered mild.

Like the Selway River, steep canyon walls plunge downward forming a tight narrow canyon that is nearly inaccessible without the benefit of man-made trails or by

the river itself. Habitable areas occur along river terraces or on the alluvial fans from the many small tributaries that drain into the Salmon River.

Aspect and elevation play a key role in the vegetative species that occur within the canyon. The south and eastern exposures are generally open with grass, sagebrush, and ponderosa pine, while the north and west facing aspects contain Douglas-fir, lodgepole pine, and a wide variety of mosses and brush.

Faunal species include mule deer, elk, bighorn sheep, and black bear as well as a variety of birds and small mammals. Rattlesnakes are also known to be present in fairly large numbers along the rocky outcrops of the Salmon River. An anadromous fishery occurs in the Salmon River with the first major runs beginning in late summer and continuing well into the late fall. Fresh water mussels can also be found along the Salmon River.

3. Synopsis and Review of Previous Investigations

a. Selway River and Magruder Corridor

Previous archeological research conducted in this area is limited to only two formal projects. The first was the 1969 survey conducted by Thomas and Turner: "A Survey and Evaluation of Archeological Resources in the Magruder Corridor, Bitterroot National Forest, East-Central Idaho." The second project was conducted in June and July of 1984 by C. Milo McLeod and Douglas Melton, Forest Service Archeologists from the Lolo and Bitterroot National Forests. The results of their investigations have recently been published in a formal report entitled, "An Examination and Test Excavation of Archeological Sites within the Magruder Corridor and Selway River Drainage, Bitterroot National Forest, Idaho County, Idaho," or SNAKES ALONG THE SELWAY.

Fieldwork for Thomas and Turner's project was conducted between June and July of 1969 and focused primarily on the Magruder Corridor. However, Thomas and Turner did record sites in some areas within Montana, specifically, along the Nez Perce Fork of the Bitterroot River. Thomas and Turner located approximately 35 sites which were recorded and assigned Smithsonion trinominal site members. They also recorded "probable sites" as well as "possible sites." An accurate definition of these site types was not included in their report; hence, the definition that follows is what is assumed to have been their logic for assigning the term "probable" and "possible" sites.

A "possible site" apparently was an area that was possibly used by prehistoric inhabitants such as "possible site 1," a large rock shelter located near the headwaters of Stewart Creek. Although no physical evidence existed such as fire hearths, lithic material, etc., the chance that it was used by prehistoric peoples is very high.

A "probable site," on the other hand, apparently was an area that appeared suitable for some type of occupation, but no physical evidence was found during the pedestrian survey. Thompson Flats is a good example of a "probable site."

In recent years, the artifacts and field notes from this project have been sent to the University of Idaho, Department of Anthropology at Moscow. The site forms have been reevaluated and Smithsonian numbers assigned to the former "probable" and "possible" sites.

Unfortunately, Thomas and Turner do not explain their survey methodology; that is why they looked where they did, and conversely, where they did not survey and why. From their report and site records, it appears the majority of their efforts were focused along the banks of the Selway River upstream from Paradise Guard Station. However, they did record several prehistoric sites at high elevations near Nez Perce Pass, Salmon Mountain, and Horse Heaven Saddle.

The site forms and associated maps are accurate, but lack extensive detail. Also, no information is given about artifact analysis.

Nevertheless, the number of sites recorded by Thomas and Turner is impressive. They certainly covered a large amount of acreage. Also, the quality of their work appears to have been very good--well above average for most archeological surveys conducted at this time.

McLeod and Melton's 1984 reexamination and test excavation of those sites previously recorded in 1969 was performed for three reasons: 1) To acquire information on the site types and their temporal affiliations for this overview; 2) to establish the presence or absence of a subsurface component for these sites; and 3) to assess the condition and relative integrity of those previously recorded sites.

High water conditions in the Selway River (June 28 through July 2) and deep snows at the higher elevations prohibited checking sites on the west bank of the Selway River or along the Elk City Road. Consequently, efforts were focused to sites along terraces and alluvial fans near the river.

McLeod and Melton conducted limited subsurface testing at seven sites. In all but one site tested, subsurface material was present, usually in substantial quantities. The results of each test excavation were recorded on a site form addendum and submitted to the Idaho State Historic Preservation Office (Boise, Idaho) and Idaho State University at Pocatello, Idaho.

The sites tested or observed by McLeod and Melton in 1984 all appear to date from a recent time period; probably within the last 3000 years. This assumption is based only upon the artifact depth (15 to 30 centimeters below ground surface) and a small side-notched projectile point. Although a corner-notched point was recovered from tests at 10IH125, it was too fragmentary to assign it to a named projectile point type of temporal affiliation.

Thomas and Turner (1969) mention a partial "teepee ring" at Stewart Creek (10IH110). If a teepee ring existed in 1969, it no longer does today--perhaps erosion from the cutbank has taken it out. Moreover, it is questionable that a teepee ring ever existed because the topography is not conducive for such site types. However, John Leiberg's 1899 report for the Bitterroot Forest Reserve shows a photograph of late nineteenth century Nez Perce teepees located near Nez Perce Pass. Also, Thomas and Turner discuss pit houses and possible pit houses occurring within their study area. Based upon topography and our current knowledge of pit house village distribution, it is unlikely these site types actually occurred as described in the 1969 report. On one site recorded by Thomas and Turner, Indian Creek (10IH107), McLeod and Melton in 1984 found no lithic material, possibly due to recent erosion of the streambank into the Selway River. However, Tom Smith, formally of the Bitterroot National Forest,

collected artifacts at Indian Creek some time during the 1950's and 1960's. Mr. Smith collected over nine projectile points and/or fragments of several distinct types.

Unfortunately, the majority of archeological work conducted within the Magruder Corridor has occurred close to the major roads above Paradise. Again, this is probably the result of poor access and logistical problems. No sites have been recorded at high elevations north of Nez Perce Pass along the Montana-Idaho border. Both are areas that for topographic and physiographic reasons appear to have a high site probability, yet have not received an archeological assessment.

b. Salmon River

Several archeological surveys have been conducted along the main Salmon River since the 1950's. Dr. Earl Swanson, an archeologist from Idaho State University, located and recorded 58 sites by 1958. Dr. Swanson also excavated the Shoup rock shelters (10LH23, 10LH63) near Shoup, Idaho, in the early 1960's. This excavation formed the basis for Swanson's belief that the northern Shoshone had a long-time depth (8000 B.P.) in eastern Idaho as well as a diversified subsistence base (Wildesen, 1982). Although the Shoup rock shelters are not specifically within Section I, they lie only 30 miles east along the main Salmon River. Until 1984 they were the only professionally excavated sites within the Salmon River drainage.

In 1971, Richard Harrison, another archeologist from Idaho State University, conducted a survey along both banks of the Salmon River between North Fork, Idaho, and the confluence of the Salmon and Snake Rivers, a distance of 125 miles. Harrison recorded over 241 prehistoric sites during his survey. These sites, in conjunction with Swanson's previous work, formally documented 299 sites (Harrison, 1971). Many of these types of sites such as occupation sites, rock shelters, burials, and pictographs occur within the Salmon River portion of the Bitterroot National Forest.

Additional survey work and site monitoring was conducted during the late 1970's and early 1980's in this area as part of the wilderness planning efforts for the River of No Return Wilderness Area and a variety of small cultural resource management compliance projects (see Appendix E, Wildesen, 1982).

During the summer of 1984, Idaho State University under the direction of Dr. Richard Holmer, Department of Anthropology, conducted excavations at Corn Creek (10LH124). This site was first tested by Lorin Gaarder in 1965 and a "pit house village site" was thought to be present, the generally accepted range for pit house villages on the southeastern plateau (southeastern Washington and west-central Idaho) is the west end of Lemhi County along the main Salmon River (Spinden, 1908).

Dr. Holmer and his field school located and partially excavated 5 pit houses. These structures contained large amounts of fire cracked rock, burned bone and shell, as well as lithic material. Occupation of these dwellings appears to have been post 11000 AD.

Cultural material was also found to occur below a layer of Mt. Mazama volcanic ash which dates from approximately 6700 years ago (Ross: 1986). Additionally, a burial was also exhumed during the Corn Creek excavations. The individual was a

mature male between 45 and 55 years of age at time of death and was interred with a covering of burned ponderosa pine bark. Radio carbon dates from this burial indicate the individual died at 770 (±70) B.P. (Sprague and Seachord, 1984). The Corn Creek site (10LH124) appears to be an extremely significant archeological site that dates from at least 7000 BP and perhaps earlier.

Additional work has been undertaken recently within the River of No Return Wilderness Area and is focused primarily along the Middle Fork of the Salmon River. Although not within the Bitterroot National Forest boundaries, the results of this work should greatly assist our understanding of the type, time period, and function of those sites located on the Bitterroot portion of the River of No Return Wilderness Area. For instance, Wildesen's (1982) The Farthest Frontier of All: A cultural resource overview of the River of No Return Wilderness Area, Idaho, provides an excellent synopsis of previous work conducted in the area. Wildesen also provides an excellent prehistoric (as well as historic) overview of what is currently known about recorded site types and cultural development in the area. Her discussion on long-range data needs, site significance, and research questions is also excellent. The Salmon River portion of the Bitterroot National Forest is adequately addressed within Wildesen's overview.

Other documents and research projects applicable to the prehistory within Section I would include: "A Cultural Resource Overview for the Salmon National Forest," (Rossilon, 1982) and "An Archeological Survey in the Big Creek Ranger District," Payette National Forest, Idaho, 1983 (Leonhardy and Johnston, 1983).

4. Chronological Framework

The majority of the sites recorded within this section appears to fall into a relatively late time period. In those sites reported by Thomas and Turner (1969) in the Magruder Corridor and reexamined and test excavated by McLeod and Melton (1984), all appeared to be relatively recent in time such as Tucannon, Harder, or Numipu cultural period (3500 B.P. - A.D. 1800) (Leonhardy and Rice, 1970). However, this observation is based upon a limited data base and few diagnostic artifacts.

J. Michael Ryan, Archeological Technician, Lolo National Forest (1981 to 1983) observed and photographed the private collection of archeological material from Mr. Tom Smith of the Bitterroot Valley. Mr. Smith collected projectile points from several areas in the Magruder Corridor, some of which are recorded archeological sites like Indian Creek (10IH107). His collection from Indian Creek (10IH107) contains 1) McKean type projectile point base; 2) stemmed indented base type projectile point; 3) Elko or Pelican Lake type points; and 4) unidentifiable point fragments. A wide variety of material is represented in his Indian Creek collection including: grey chert, red jasper, and obsidian. Based upon the projectile point styles from here, site No. 10IH107 appears to have been occupied intermittently since at least the late Tucannon (Leonhardy and Rice, 1970), or Late Plains Archaic Periods (Frison, 1978), approximately 3000 years ago. No test excavations were conducted at this site. However, based upon the topography, the confluence of Indian Creek with the Selway River, and a large open ponderosa pine flat, it is strongly suspected 10IH107 was a sizable occupation site during prehistoric times. Also, several scarred ponderosa pine (cambium peeled trees) were observed, photographed, and recorded

as part of 10IH107. Apparently, these were missed or were an unknown site type to Thomas and Turner in 1969.

Diagnostic artifacts have been collected by Mr. Smith near Grass Gulch (10IH126) and consist of several side-notched projectile points made from red and white cherts as well as basalts. The artifacts at this site all appear to date from the later periods such as Harder (Leonhardy and Rice, 1970), Blue Dome (Swanson, 1972), or the Late Prehistoric Period (Frison, 1978).

Mr. Smith also collected diagnostic artifacts from the vicinity of Paradise Flats (no site number) which appear to indicate a longer time span than originally perceived for the Upper Selway River. A total of 12 projectile points were recovered on the surface by Mr. Smith of which the major portion appear to date from the Late Harder Period and/or Late Prehistoric Period. However, three of these points may date from earlier periods. One basalt Elko/Pelican Lake type projectile was recovered here as well as one basalt stemmed indented base point. Likewise, one definite basalt Elko point was also recovered from this site. These earlier projectile points appear to show use and at least limited occupation within the Upper Selway River from at least the Tucannon or Late Plains Archaic Periods approximately 3000 years ago.

Thomas and Turner reported one "pinto" type projectile point recovered from 10IH106, which could indicate an earlier component. Otherwise, no sites earlier than the Tucannon Period (3000 B.P.) have been found within the Magruder Corridor. More extensive inventory and test excavations will be necessary to accurately determine the presence or absence of earlier materials such as Cascade or Windust within this area.

The Salmon River portion of the Bitterroot National Forest contains several prehistoric site types including rock art (pictographs), rock shelters, open air occupation sites, and lithic scatters. One site (10IH33) near Lantz's Bar contains a possible Cascade component (5000-8000 B.P.), based upon lithics and artifacts observed on the surface (Price, 1982). Other excavated sites a few miles up river such as the Shoup rock shelters have substantiated occupation dating to 8000 B.P. Also, the site at Corn Creek (10LH124) contains an occupation level at least 5000 years old and perhaps earlier. Also, it has been determined that pithouses do indeed exist at Corn Creek, although not in the numbers once suspected (Holmer, Personal Communication; 1985).

It is likely that some of the prehistoric sites on the Bitterroot National Forest along the main Salmon River range from at least 8000 B.P. up to the recent periods. These sites would fall within the Cascade Phase (Leonhardy and Rice, 1970), or the Birch Creek Phase (Swanson, 1972) and continue up to and include sites from the Numipu and Lemhi Phases.

5. Ethnographic Framework

The area which comprises section I (the Selway and Salmon Rivers) was occupied at contact by the Northern Shoshone; specifically, the Lemhi and Tukdeka. Both groups were known as sheepeaters. The area was also the eastern edge of the home range of the Nez Perce. Also, the Flathead Indians who occupied the Bitterroot Valley to the north and east used the area for fishing, hunting and as a refuge from Blackfoot raiding parties.

Some authors think the Shoshone were fairly recent arrivals into this area (Malouf:1967, Butler:1981) while others (Swanson:1972) believe they occupied the same area for nearly 8000 years. Likewise, (Turney-High:1937) believes the Flathead were also fairly recent arrivals to the Bitterroot Valley. The Nez Perce, on the other hand, appear to have dwelt within their tribal boundaries for time beyond memory (Spindon:1908).

All groups received the horse in the early 1700's although the Shoshone were probably the first to acquire the animals. Acquisition of the horse greatly facilitated the mobility of the three groups and treks east of the Continental Divide to hunt bison became an integral part of their subsistence patterns. The Southern Nez Perce trail which bisects this area was a well-traveled route to the east by the Nez Perce and a western travel route for the Flathead.

The Flathead, Nez Perce and Shoshone maintained amicable relations at the time of white contact. They would frequently band together to hunt bison on the plains for protection against Blackfoot raiding parties.

6. Gaps in Knowledge

a. Surveys

The area adjacent to the Salmon River has been well surveyed in Section I (Harrison, 1971) (Appendix E, Wildesen, 1982). However, the secondary drainages and upland areas have yet to be assessed. Dr. Frank Leonhardy from the University of Idaho has undertaken survey work within the Middle Fork of the Salmon River drainage and has found numerous prehistoric sites at the higher elevations. A similar site distribution may exist in Section I north of the Salmon River.

Also, the Selway River south from Paradise Guard Station to Thompson Flats has been surveyed, at least along the east side of the river (Thomas and Turner:1969)(McLeod and Melton, 1984). Additionally, some of the higher elevations have been assessed such as Kim Creek saddle and Salmon Mountain, etc. Unfortunately, these are the areas where access is relatively easy primarily due to existing roads. The Selway River should receive at least a sample inventory downstream from Paradise Guard Station to Selway Falls. This area is relatively undisturbed by development and may contain significant occupation sites possibly of considerable time depth. On the other hand, the area may be essentially void of sites because prehistoric use of the Selway River focused only near the headwaters, i.e., Magruder and Paradise or below Selway Falls. Only judicious surveys and limited testing of this area will provide the answer.

Finally, the high elevations north of Nez Perce Pass need to be assessed for the presence of prehistoric sites. Sites occur further north such as at Big Creek Lake (24RA34), so it is not unlikely they should occur in this area. Again, only on-the-ground surveys can answer this question.

b. Excavations

To date, no formal excavations have been conducted within Section I. This is in the most part due to the area's wilderness designation. Seldom in wilderness

areas do project activities occur that trigger the formal mitigation of prehistoric sites.

In the Salmon River drainage, both Shoup rock shelters and Corn Creek (10LH124) have been excavated. Although these sites lie east of Section I, it is likely that similar type sites along the Salmon River on the Bitterroot National Forest would contain artifacts of similar type and age.

No sites have been formally excavated within the Selway drainage; however, McLeod and Melton (1984) tested several previously recorded sites and found subsurface cultural material in all but one. Site no. 10IH140 (rock shelter), although tested with negative results in 1984 should contain extensive cultural deposits. A more complete testing program should be undertaken at this site in the future. Also, more complete testing should be undertaken at sites adjacent to the Selway River to: 1) establish an accurate time depth for occupation; 2) determine the type and function of sites; i.e., do pithouses actually exist or are they tree turnovers or roasting pits similar to those at Corn Creek (10LH124); 3) determine the source areas (and possible trade/travel routes) for stone tools and lithic material from sites in this area.

c. Site Types

Almost all site types discussed within Chapter VI occur within Section I. As discussed previously, whether many of these sites are indeed the types described on the initial inventory remains to be confirmed, i.e., pithouses, teepee rings, etc. The only site types not recorded in this area currently are quarry sites or lithic procurement areas, religious sites and roasting pits. It is likely these site types do occur here, but inventories have been so limited that perhaps they have not been found.

d. Chronology

The earliest recorded site within Section I appears to be 10IH33, an occupation site/lithic scatter located near Lantz's Bar along the Salmon River. This site contains a possible Cascade (5000-8000 BP) component based upon lithics and artifacts observed on the surface (Price, 1982). It is likely, however, that other sites exist contemporaneous with this site or perhaps even earlier along the Salmon River.

In the upper Selway drainage the earliest projectile point appears to be a "pinto point" recovered by Thomas and Turner (1969) from site no. 10IH106. Otherwise, no evidence of prehistoric use for this area appears before the Tucannon period, approximately 3000 BP. This assumption is entirely speculative and is based solely on artifacts from this area currently in a private collection.

Clearly, further work needs to be done to establish a chronological sequence of prehistoric use for the Selway River drainage.

7. Summary

Section I (Salmon and Selway Rivers) is probably the most unique and diverse archeological area discussed in this overview. It is unique because it is the only area that contains an anadramous fishery resource. Also, because of its

isolation and wilderness designation, most sites remain essentially undisturbed except for damage inflicted by collectors or natural erosion. Finally, nearly the entire section is owned and managed by the Federal Government. In other sections discussed in this overview, very little Federal land exists along the major drainages. Consequently, the majority of the large stratified prehistoric sites receive little or no protection or professional evaluation and much important data has been lost. This is not the case along the Salmon and Selway Rivers.

Ethnographically this area is diverse and was occupied by the Northern Shoshone and Nez Perce Indians. The Flathead were also known to use the area. The southern Nez Perce trail bisects the area from the west fork of the Bitterroot River to near present day Elk City, Idaho. The importance of the trail during the historic period has been well chronicled. However, the role this route played during the prehistoric periods has yet to be assessed.

Finally, with exception of sites immediately adjacent to the Salmon River, very little archeological work has been done in this area. In fact, it is probably the least studied area within the Lolo or Bitterroot National Forests.

8. Future Research Questions for Section I

The existing archeological evidence in this area poses many questions for future research. Today's archeologists and those who will follow in the future should begin viewing the data with specified research questions in mind. For without specific questions to answer the data that has (and will be) laboriously acquired has little value.

Some possible research questions for the Selway and Salmon River areas are:

1. Were the mountain ranges, i.e., Bitterroot Divide, significant barriers to the movements of prehistoric peoples?

2. Can prehistoric travel corridors over the mountains be accurately established? If so, what was there period of use? Were they used all year or only during certain seasons?

3. How do the archeological manifestations, i.e., site types, artifact types in this section, compare to those in other sections in Montana and in Idaho?

4. What stone raw material use patterns occur in this section? Where is the material coming from and how does it arrive trade, individual procurement, etc.

No doubt other questions will arise, but these are at least a beginning for extracting relevant information from the wide range of archeological manifestations in this area. Appendix No. 1 shows the prehistoric sites currently recorded in this section.

C. Section II - Upper Clark Fork and Bitterroot Rivers

1. Environmental Setting

Section II encompasses a wide and diverse area that includes all of the Bitterroot Valley to Missoula on the east and Lolo Creek on the west. From this point it stretches eastward through the Clark Fork Valley to Bearmouth, then moves southward through Rock Creek to the junction of the Granite and Powell County lines. This section contains several different ecozones. The major topographic features of this section are defined by large, flowing bodies of water or high mountain ranges which dominate the visual perspective. In addition to being environmentally diverse, this section has long been the scene of many archeological investigations. Surveys, small scale testing, and excavations have all been conducted within this section. These undertakings are discussed in greater detail below. However, first it may prove useful to break down this section into three separate smaller areas and discuss environmental similarities and differences. The three areas are: 1) the Bitterroot River Valley; 2) Rock Creek; and 3) the Upper Clark Fork River.

a. Bitterroot Valley

The general environmental pattern of the Bitterroot follows the typical pattern of much of the northern Rocky Mountains--that is, north-south trending mountain ranges separated by flat valley floors and foothills. The view is dominated by mountains, particularly the Bitterroot Range on the west side. The Bitterroot Valley itself is 60 miles long (north-south) and 4 to 10 miles wide (east-west). It is bordered on the west by the Bitterroot Range and on the east by the Sapphire Range. The topographic variety provides for a diverse mosaic of plant and animal communities (USDA, 1984). The more mountainous portions of the Bitterroot Range would not have been able to hold a high population density prehistorically (Fredlund, 1979).

The Bitterroot Valley was the scene of extensive pleistoscene glaciation. This has left its mark in terms of moraines, cirques, and strandlines from Glacial Lake Missoula. This in turn has shaped the present surface. The climate is determined by elevation (i.e., as one moves toward the higher elevations, the climate becomes cooler). The valley itself is generally described as being semiarid; however, precipitation can reach upwards to 100 inches in some areas. Most of the precipitation is in the form of snowfall. Snowfall is the principal source of precipitation for streamflow and water recharging of various streams. Based on climate, aspect, exposures, and elevation, eight vegetation zones have been identified in the Bitterroot (USDA, 1984). This excludes the valley floor which has undergone extensive historic modification.

A variety of faunal resources are present in the Bitterroot. These include a number of birds, small mammals, deer, elk, bighorn sheep, moose, mountain goat, and black bear. In addition, bison appear to have been fairly numerous prehistorically (Suckley, 1855). Grizzly bears also may have been present as well as a variety of fish. Large runs of salmon and other anadromous fish are absent (USDA, 1984).

b. Rock Creek

The Rock Creek drainage follows the general northern Rocky Mountain pattern of north-south trending valleys. Keyser, et al. (1974:4) states that there are two types of valleys; one is a narrow, deeply incised stream with precipitous sides (lower Rock Creek), and the other above the confluence of Willow Creek is a broader, open glaciated valley. Much of the area outside of the Rock Creek drainage consists of fairly broad flat-topped ridges with steep sides forming sharp U-shaped valleys. Glaciation is evident throughout most of the drainage (USDA, 1977:1), but is generally thought to be more extensive in the upper drainage (Keyser, et al., 1974).

Rock Creek is one of the major drainages in the upper Clark Fork River. Large amounts of ground water are present, being recharged from snowbanks. The drainage is well known for its fishery resource. Some of the fish present in the drainage may have been available prehistorically and served as food resources for the section's aboriginal inhabitants.

A variety of fauna is present in the area. These include deer, elk, moose, bighorn sheep, various small mammals (rodents, etc.), bald and golden eagles, pine martens, and 111 species of birds. Keyser, et al. (1974) were unable to find any evidence of large numbers of bison; however, their presence was noted in collections from site No. 24GN22. Most of these would have served as food resources for the area's aboriginal inhabitants during the Prehistoric and Early Historic Periods.

c. The Upper Clark Fork River

The Clark Fork River is the principal tributary to the Columbia in western Montana. The river itself may date to the Tertiary epoch (Rasmussen, 1969). The area contains a long and late complex geologic history. Geologic activity resulted in deposits of chert, quartzite, basalt, and other raw materials that were exploited by the area's prehistoric inhabitants.

Much of the Clark Fork Valley in the study area is enclosed by the Garnet Range on the north and the John Long and Sapphire Ranges on the south. The Clark Fork River has cut a narrow east-west trending wall through this area. In portions of the area, alluvial terraces have been deposited. These were utilized by prehistoric people as camping spots. Flint (1977) noted that the north side of the river was generally more favorable to prehistoric occupation than was the south side. This observation was also noted by Griswald and Larom (1954). Griswald and Larom (ibid.) also note historic decline in available water from springs in the area.

A variety of animals were present in the area. These include bison, deer, elk, bighorn sheep, mountain goats, moose, bears mountain lions, wolverine, rabbits, bobcat, and small mammals. The area from the Upper Clark Fork River also contains the only reported late fossil mammal remains from western Montana that indicate a different environment (Rasmussen, 1974). Fish are also present in the Clark Fork River and in larger tributaries. Also present are a number of bird species, both as year-round and as seasonal inhabitants (Flint, 1977). Most of these would have served as prey species for the area's inhabitants. A wide variety of plant resources were known to have been present; however, large root fields such as those at Camas prairie appear to be absent.

All of the environments show similarities in that they are typical valleys of the northern Rocky Mountains. These are all well watered, essentially flowing into a central drainage. Most prehistoric sites are located along these water courses or on saddles along ridge systems. All of the areas show a diverse fauna that was extensively utilized by the area's prehistoric inhabitants along with plant resources. All three areas probably lacked a substantial fishery such as those located west of the Bitterroots. The topographic variation in each area would have necessitated scheduling to exploit these areas at appropriate times of the year.

Major differences between the area appear to relate to differing geological processes. This manifested itself in the archeological record by heavy reliance on local raw material sources in the Bearmouth/eastern portions of Rock Creek. Elsewhere, such as the Bitterroot and Clark Fork Rivers in the vicinity of Missoula, almost all artifacts are manufactured from "outside raw material sources." Elevation also plays a role in site size throughout the three areas. In general, the larger sites are located along the major river terraces in the Bitterroot and more often the Clark Fork Rivers.

2. Synopsis and Review of Previous Investigations

Previous investigations in this section are as follows. Dr. Carling Malouf surveyed portions of the Bitterroot Valley in 1951. The results of this survey were incorporated into the Montana Western Region chapter of his doctoral dissertation title (Malouf, 1956a). The following year (1952), portions of the Missoula Valley were surveyed (Moomaw, et al., 1952). This survey was concentrated in the University of Montana (U of M) area, the vicinity of the Wilma Building, and areas west and northwest of Missoula. In 1953, Gillete Griswald and David Larom of the U of M surveyed eastward from Missoula to the vicinity of Rock Creek (Griswald and Larom, 1954).

Following these early surveys, little work was undertaken in this section during the late 1950's and 1960's. Several unpublished manuscripts and student papers may exist for this section but are not currently available to the authors. Linda Ward surveyed and excavated known sites within the Bitterroot Valley as part of her Master's Thesis from the U of M (Ward, 1973). The U of M conducted test excavations at 24MO1002. The testing results were negative (Smith, 1974). In 1974, the U of M, under contract with the Forest Service, surveyed portions of the Rock Creek drainage (Sharrock, et al. 1974). The U of M also undertock excavations at the Bearmouth pictograph site (Taylor, 1976). Patricia Flint, a graduate student at the U of M and later a doctoral candidate at the University of Oregon, surveyed the Bearmouth and Flint Creek areas for her MA thesis and Phd. dissertation, respectively (Flint, 1977, 1979, 1982, 1983). The Forest Service has undertaken in-house cultural resource work since the mid-1970's. An archeological site at Big Creek Lake was excavated because of proposed impacts in 1977 (Fredlund, 1979). Small scale cultural resource inventories were also conducted at this time for a variety of other projects such as sewer line and subdivision (Taylor and Till, 1979, and Melton, 1980).

The majority of all cultural resource work since 1980 has been limited to in-house Forest Service surveys and a few testing projects such as the Jennings Camp Creek site no. 24RA154 (Light, 1982). All of the reports mentioned above are discussed in greater detail below.

a. Missoula Valley Survey (Moomaw, et al., 1952)

This survey was done as a class project at a time when almost nothing was known about the archeology of western Montana. This survey documents the presence of prehistoric archeological sites in Missoula and more specifically on the grounds of the University of Montana. A burial and a lithic scatter were reported; however, no site forms or legal locations were given. Of general interest is the reporting by an ethnographic informant of a prehistoric campsite and burial in the vicinity of the Wilma Building. Most of the survey lies to the west in Section IV and will be dealt with there. The Region I section covered by the survey is fairly well documented given the time of this report. It lacks, however, any strong conclusions.

b. The Hellgate Survey (Griswald and Larom, 1954)

Again, this work was done to fulfill student class requirements and covers the area from Missoula eastward to Rock Creek. Nine occupation sites were located; most of these were on the north side of the river at the mouths of gulches or on tablelands adjacent to gulches. Two-thirds of the projectile points recovered were corner-notched. These were attributed to late prehistoric period affiliation. The predominant raw material was "jasper," which outnumbered other material with a ratio of 3.5 to 1. The survey itself recovered a total of 118 artifacts--all tools. Sites were collected, but when enough material was recovered to establish the presence of a site, collection ceased. Most of the artifacts recovered were illustrated in their report. Not all located sites were labeled because they did not meet Griswald and Larom's criteria. An example of this is the site on Beavertail Hill. One other problem of the survey is the lack of testing on their part. Although the authors note that they tested--they do not note where they tested and why. On the more positive side, the collections from this survey are well documented with access available at the University of Montana, Department of Anthropology.

c. Bitterroot Valley Survey (Linda Ward, 1973)

Linda Ward surveyed portions of the Bitterroot Valley as part of the requirements for her Master's degree in anthropology at the U of M. Using data Malouf had previously compiled, information from local informants, and some selective survey, she was able to locate a total of 19 prehistoric sites. These included a burial, scarred trees, a medicine tree, rock art sites, and open air occupation sites. She undertook this survey for three purposes: 1) to document prehistoric occupations that may relate to Plateau, Great Basin, or Plains cultural affiliations; 2) to establish a cultural historical framework for the study area; and 3) to construct explanations of how and why people chose to live in the study area. She noted that sites were not located at any specific topographic feature. Somewhat surprising, given ethnographic accounts of the valley, is the lack of camas or other root processing sites. Ward recorded artifacts ranging from the "Middle Plains Archaic" (Duncan/Hanna) through the late prehistoric period. She noted that definite Plateau traits began to appear at A.D. 1300. Following this, an influx of traits entered from the Plains and Plateau alternatively. She concluded that rock art sites were the dominant site type in this area. One small rock shelter was tested. A 3-foot by 3-foot trench was excavated to a depth of 6 feet below the surface. Cultural material was found to a depth of 4 feet 3 inches below datum. Several problems exist

with this report. One is Ward's view that the mountains acted as a barrier against excessive prehistoric occupation. This assumption has been rejected by numerous authors. Other problems include the assignment of various artifacts to various cultural affiliations and the present location of the artifacts recovered. Better documentation is also necessary for some sites. In subsequent years, several of the sites Ward recorded may have been destroyed. The Wallbillig site (24MO1082) is an example of an inadequately described site, particularly the map of the site (Galm, 1984).

d. The Hanncock Site (24MO1002) (Smith 1974)

Dr. Charlene Smith conducted subsurface excavations at the Hanncock site (24MO1002) near Rock Creek. Previous landowners had reported the presence of "brown flint arrowheads." Three 5-foot square test units were excavated. These tests were spaced 100 feet apart. The site was not mapped. All of the subsurface tests were negative, as was the surface inventory. This report serves to document the fact that surface collection can totally eradicate a site.

e. The Rock Creek Survey (Keyser, et al., 1974)

This survey at Rock Creek initiated the first large-scale Forest Service involvement in cultural resource inventories. Rock Creek was selected because of the creek's current heavy use and in anticipation of future land- use planning needs. The drainage was divided into areas of high and low survey priority. Areas of high priority were intensively surveyed; low priority areas were only sampled. The authors did not, however, indicate their sampling methodology. Additionally, the investigation was to check the presence of 20 sites which had been reported by local residents (Hilmo, n.d.). A total of 15 prehistoric sites were located. Ten were thought to be the result of short term occupation; one site, 24GN28 (rock cairns), was thought not to be prehistoric; and the other four sites were all thought to represent more substantial occupations. One of these, 24GN501 (Devil's Eyebrow), represents a center of raw material extraction containing quarry pits, etc. This site had been described several years earlier by Tro and Tro (1968).

Tro and Tro illustrated the midsection of a large lanceolate blade that may represent a paleo-point (Choquette and Holstine, 1982:42). The oldest projectile points identified from within the survey area itself appeared to be related to Duncan/Hanna types of the Middle Plains Archaic Period (2000-1000 B.C.). Also present were small side- and corner-notched points that are generally attributed to the Late Prehistoric Period (A.D. 500-1700). Further work was recommended for those areas sampled. It was also recommended that several sites be either tested or fully excavated since all the work to date has been surface collection. Several of the conclusions of this survey are open to considerable question. Quite simply, to state that the Rock Creek drainage was not used extensively during the prehistoric periods because the same resources were available elsewhere is a gross oversimplification. On a positive note, the collections from this survey are well cataloged and easily accessible.

f. The Bearmouth Pictograph Site (24GN1001)(Taylor 1976)

This site was excavated by the University of Montana over a period of several years during the early 1970's (Taylor, 1976). Its importance lies in its

artifact content which includes large numbers of worked bone, bird bone, beads, shell, and antlers. Possible carnivore claws and small fragments of pottery were also present. Taylor attributes the pottery as Great Falls ware. It is possible that this pottery ware is assignable to historically known groups living east of the Continental Divide (Kehoe, 1959), thus placing the site within the Late Prehistoric Period. Projectile points recovered from excavation units agree with this date. Excavation was to 32 inches below surface, where the author noted fire lenses, fragmented deer bone, and occasional artifacts. Taylor suggested that the mundane artifacts are associated with the occupation, while the more spectacular and rare artifacts are associated with the pictographs which in turn are thought to be associated with the supernatural. This report, however, has a couple shortcomings. Also, the artifacts are not illustrated. Taylor's suggestion that the site be radiocarbon dated was not followed. Although photographs were taken, not all of the pictures were developed, which is unfortunate because some of the artifacts are unusual and more importantly are rare in western Montana prehistory.

g. Big Creek Lake (24RA34) (L. Fredlund, 1979)

Big Creek Lake represents the largest excavation undertaken to date in this section. This site is a multicomponent open-air occupation site. Artifacts definitely range from the McKean type projectile points indicative of the Middle Plains Archaic (2500-1000 B.C.) through historic types. Several specific research questions were posed, these including the site's function, the role of seasonality on small groups, and the validity of Reeve's (1970, 1972, 1983) Blue Slate Canyon subphase as a regional variant of the Pelican Lake Phase. One other hypothesis suggested was the possibility that large corner-notched points are affiliated with either Pelican Lake Phase or perhaps the earlier Mount Albion Complex (Benedict and Olson, 1978) of the Early Plains Archaic Period (5500-3000 B.C.). Excavation was by 1-meter by 1-meter squares dug in 10-centimeter arbitrary levels. One-hundred and eleven 10-centimeter units were excavated. The report included a detailed examination of the lithic artifacts. This is one of the few such discussions anywhere in the literature of western Montana.

A variety of material was recovered, including obsidian, basalt, indigenous cherts, quartzite, vitrophyre, siltstone, grey welded tuff ignunbrite, and chalcedony. Four thousand flakes, three cores, five drills, 19 flake tools, 13 side scrapers, four end scrapers, 14 point fragments, one square biface, five bifaces, ten late-period points, 39 serrated Pelican Lake points, 31 Big Creek corner-notched points, and five McKean points, plus associated unmodified cobbles, pebbles, and historic material were recovered. However, no features were located. Fredlund presents several conclusions. Among these are the absence of any substantiated evidence of the Blue Slate Canyon subphase (Pelican Lake Phase), the possibility that Big Creek corner-notched points represent Early Archaic projectile point types (ca. 4000-3500 B.C.), that the site was occupied during the summer and early fall, that the site was occupied on a seasonal and scheduled basis, and that mountain sheep were the primary prey species hunted. There is no evidence to support the last claim however.

This report contains data that is both well reported and illustrated. Perhaps one of the weak points of the report is the lack of clearly defined conclusions. It is believed that the collections are currently curated at

Montana Technical College in Butte, Montana. Access to the collection is currently unknown.

h. BTG Timber Sale Report (Matthew 1982)

This report (Matthew, 1982) represents one of the more complete Forest Service in-house inventories. Nine sites were located; five of these were prehistoric or possibly protohistoric. Since portions of this area had been surveyed earlier, areas that offered a high probability of containing sites such as saddles on ridge systems or reasonably broad valleys were tested for subsurface deposits. Also, when historic records indicated a possibility of sites being present, these areas were intensively examined. One site (24GN203) was recommended for further work to mitigate proposed road construction (Matthew, 1984). The prehistoric sites located were all either lithic scatters or open-air occupation sites. The predominant artifact types recovered were unmodified flakes. A Late Plains Archaic Period corner-notched projectile point was recovered from 24GN203. Also, one bison bone and one horse bone fragment were recovered at 24GN130. This is one of the few examples of horse bone in an archeological context from Montana. The collections from this survey are currently curated at the Lolo National Forest Supervisor's Office. The weakest point of this report is the lack of detailed interpretation of both the artifacts recovered and the sites recorded.

i. The Upper Clark Fork and Flint Creek Valley (Flint 1977-83)

The various works by Patricia Flint (1977, 1979, 1980, 1982, 1983) in the Bearmouth and Flint Creek areas represent the only long-term "pure research" oriented work done in this section. She has recorded a variety of site types including medicine trees, burials, large open-air occupation sites, food processing plants, quarries, small lithic scatters, and ochre deposits. If nothing else, Flint has uniquely interpreted her work. In her Master's Thesis, she recorded 11 sites. These include six occupation sites, two quarries, two "religious shrines," and a burial site. Several had been previously recorded by Griswald and Larom (1954) and by Taylor (1976). Flint suggested that the sites on the left bank may have been occupied more recently than those on the right. She went on to suggest the possibility that a special segment of the population may have also used the area for religious purposes. Artifacts recovered included projectile points, scrapers, knives, flakes, cores, possibly a graver, an oblute maul, and pestles. Diagnostic artifacts range from Middle Plains Archaic to the Historic Period. The present location of the artifacts recovered from this survey is unknown. Flint (1979) reported in greater detail one medicine tree that had been reported in the survey mentioned above. Most of this report was concerned with documenting a large ca. 300-year-old ponderosa pine stump which was the Rams Horn Medicine Tree of the Flathead Indians. Flint's evidence was the presence of a basalt knife and a scraper in the vicinity of the tree. This is rather weak evidence to support the claim; however, she was able to relate at least some of her assumptions with ethnographic and historic evidence.

Flint (1980) excavated a small site to answer two research questions, one concerning changing projectile point styles and the other differential use of lithics. An area 6 meters square was excavated to 65 centimeters with 1 meter being excavated to a depth of 1 meter. Thirteen points, six scrapers or knives, two pieces of shell, 554 pieces of bone, and 1,260 pieces of flaked stone. A

single radiocarbon date of 140± 180 B.P. (Gak 8536) was obtained. This is the only radiocarbon dated site in Granite County. Diagnostic projectile points range from Duncan/Hanna to an unnotched triangular point. Flint sees this site as being indicative of the typical northern Rocky Mountain region cultural sequence. She thinks most of the lithic material came from local sources. The Duncan/Hanna point was made of obsidian that has been identified as coming from Timber Butte in Idaho (Flint and Sappington, 1982, and Sappington, 1984). Based on the presence of large amounts of fire-cracked rock and the protected location of the site, Flint suggests that this is a winter-occupation site. Most of the problems with this report lie in how Flint interpreted the material recovered. For example, why do large quantities of fire-cracked rock necessarily represent winter occupations? Exactly where she obtained the dates for her projectile points sequence is somewhat of a mystery since nowhere do Duncan/Hanna points date of 4000 B.C., etc. The excavations at this site have lead to her formulation of the Northern Rocky Mountain Region culture area concept.

Flint (1982, 1983) has formulated a controversial concept called the Northern Rocky Mountain Region. She sees the area roughly running north of the Snake River then eastward to the Bighorn Canyon, westward to the Idaho Stateline and northward to the vicinity of the Canadian border. She summarized the environment and compiled an extensive ethnographic trait list that she correlated with several environmental zones. Flint also conducted a sample survey of portions of the Flint Creek Valley. She used a random sample of 360 one-quarter acre sample plots in a 90-mile transect. Approximately 10 percent (36) of the units were surveyed. A total of 36 sites were located.

Next Flint correlated the results of her survey to her ethnographic model. Not surprisingly, she saw the material recovered as fitting the ethnographic model. From this, Flint suggests year-round occupation of the Flint Creek Valley. Flint took the information from her survey and excavation at the Graybeal site and compared it to information gathered by other investigators in the area. From this she formulated a sequence of changing projectile point styles that may be indicative of changing cultural complexes. This report is difficult to use for several reasons: 1) the use of the ethnographic record may not be appropriate in all cases; 2) the area which Flint defined contains significantly different resources that simply do not allow it to be considered a single culture area; and 3) she includes areas in her region such as northern Idaho, but did not discuss any work conducted there. Additionally hampering the use of this document is the poor quality of illustrations. Again, the present whereabouts of the collections from the sites located by Flint are unknown. In summary, this work attempts a major integration of both Flint's and other works in the the area, unfortunately it falls short of its stated goals.

j. Jennings Camp Creek (24RA154)(Light 1982)

Light briefly reported on excavations at 24RA152 (Jennings Camp Creek site). Twelve 1- by 1-meter squares were excavated below 20 centimeters, nine of which were excavated below this depth. Material recovered included 46 flakes and chips and 1 projectile point which was found on the surface. This excavation was undertaken to determine the site's eligibility for the National Register of Historic Places, the period of occupation, and to delineate the site's boundaries. It was suggested that the cultural materials might have been secondarily deposited, or if primary deposits, the site would represent

short-term occupation. The excavators were not able to assign a function to the site, nor to assign it to any particular cultural period.

k. Lost Horse Creek (24RA156)(McLeod 1983)

McLeod and Ryan tested 24RA156 in April 1983. This site is a small, short-term occupation. A single 1- by 1-meter unit and five 2-foot square shovel tests were excavated. Units were excavated to a minimum depth of 20 centimeters. Materials recovered included 31 flakes, one stone drill fragment, and one knife/point tip. Also associated were several modern rifle cartridges. Site protective measures were implemented; however, it would appear that further work needs to be done at this site prior to any definite conclusions.

L. West Fork Rockshelter (24RA36)(McLeod 1985)

The West Fork Rockshelter was first recorded in 1976. At that time, the site was completely intact. However, sometime during 1983 or early 1984 vandals had begun to "pot hunt" the site. Test excvations were conducted during the 1985 field season for two reasons. First, to determine if 24RA36 was indeed a significant archeological site. And, secondly to obtain a representative sample of the archeological material before the site was further damaged.

The site was mapped and photographed prior to excavation. Two 1- by 1-meter units were excavated to a depth of nearly 80 centimeters and a large amount of archeological data was obtained. Over 30 chipped stone artifacts were recovered including 13 projectile points or fragments thereof. Also, large amounts of bone, shell, and chipped stone were recovered. Soils from this site are currently undergoing floatation analysis at the University of Montana. Two radio carbon samples were obtained and have since been submitted to the laboratory for dating and faunal analysis of the bone fragments (for specie identification) will be conducted during the winter of 1985-1986.

The West Fork Rockshelter (24RA36) is an important prehistoric site in section II. It contains extensive archeological and environmental data such as a defined stratigraphy, for chronological dating, undisturbed soil samples for both micro and macro floatation analysis as well as extensive bone deposits where faunal analysis can tall us which species of animals were utilized by the prehistoric inhabitants.

3. The Chronological Framework

Even though diagnostic artifacts are rare in this section, those which have been found indicate that the area was occupied for several thousand years. Because of the lack of radio carbon dated sites, most authors have been forced to use the change in projectile points to demonstrate time depth. Only one C-14 date is known from the entire section, and only two sites have been dated by obsidian hydration (24GN61 and 24RA34). Since Caywood and Light (1984) have utilized Frison's (1978) chronological scheme in their Bitterroot Forest Cultural Resource Overview, it will also be used here. Figure 9 shows the dates and names of the chronological periods involved.

Currently, there is only one reported Paleo-Indian artifact from this section. This is an Agate Basin point (Thomas and Turner 1969) which is in a private collection from Como Lake near Darby, Montana. It is also possible that other

early period projectile points exist in private collections from this section; however, no definite evidence for occupation during this time has been found.

Several Early Archaic Period projectile points may have been found in this section; however, in all cases these points have come from either surface collections or undatable contexts. Sites include 24RA34 (Big Creek Lake) and 24GN287 and 24GN61 (Graybeal site). Until a site is excavated which contains materials that can be dated, nothing beyond speculation and comparison can be said about this period.

The Middle Plains Archaic Period is well represented in this section. Most excavations and surveys have produced materials of that time period, but no sites have been definitely dated to this time period. There appears to be an increase in the numbers of projectile points over previous periods. Sites producing McKean complex material include 24MO1082, 24MO11, 24RA34, 24RA516, 24GN61, and 24GN27. Most of these points recovered from surface collections and excavations are of the Duncan/Hanna variety. The exception to this is 24RA34, where five McKean lanceolate points were found. The two types are not found together in this section. Malouf (1956a) and Ward (1973) have suggested that these projectile points represent the earliest occupations of Section II. Traditionally, people from this time period have been represented as "foragers" or people forced to make use of all subsistence items available to them and were most often compared to Great Basin Shoshones. Fredlund (1979) suggested that McKean complex hunters at Big Creek Lake were small family-sized groups that seasonally utilized the site, perhaps hunting bighorn sheep. A similar picture is likely for other sites dating to this period.

The Late Plains Archaic Period is represented by large corner-notched projectile points that were used with spear throwers or atlatals. Most of the sites with diagnostic materials recovered from them may date from this time period. Sites containing corner-notched projectile points range from a single point (Light, 1982, and Matthew and McLeod, 1982) to 39 (Fredlund, 1979). From within this section, corner-notched points have generally been labeled as being equivalent to Pelican Lake Phase artifacts found on the northern Plains further east. As noted above, the excavations of Big Creek Lake failed to confirm the presence of the hypothesized Blue Slate Canyon subphase (Fredlund, 1979). Malouf and others suggested that corner-notched points occur up to white contact. This, however, needs to be assessed in more detail before a definite statement can be made. Also, Besant points may have been present at the Graybeal site and possibly a few others.

Late Period sites show a decline in numbers from the Early to Late Archaic Period. Although there are a number of late prehistoric sites, Avonlea points, which are diagnostic of this late period elsewhere, have not been found in this section. At least one of these sites (24GN13) shows strong affinities to the Columbia Plateau, perhaps fitting into the Late Harder Phase. Other Late Prehistoric Period points from this section show affinities to the Great Basin or Plains. It is during this time that the historic tribes present (see Chapter VII) began to occupy the area; however, exactly when this occurred is not documentable in anything but the crudest of terms. Contrary to the views of some, the presence of either obsidian or cryptocystalline material does not automatically place the site into the Late Prehistoric Period.

4. Ethnographic Framework

Three of the four groups identified in the ethnographic chapter were known to have been present in the section: the Flathead, Pend d'Oreille, and the Shoshone. It is likely that these three groups were all fairly late arrivals to the area. This would mean that to use these tribes as models for prehistoric settlement and subsistence could be misleading.

There is some suggestion that the Pend d'Oreille may have been the original inhabitants of this section (Turney-High, 1937). Teit (1930) listed a group called the Sem 'tuse who may have inhabited this area; however, Choquette and Holstine (1982) note that there might be a "cultural boundary" between the northern portion of this section and Section III. Despite some suggestion to the contrary (cf. Cameron, 1984), this observation would appear to be confirmed by the examination of collections from this section.

As noted above in the ethnographic chapter, the Shoshone appear to have occupied the southern- most portions of the section. Growing evidence would also suggest that their entrance occurred fairly late (Butler, 1981, and Malouf, 1967). They do not appear to have been long-term occupants.

By the time of white contact, much of this section, particularly in the Bitterroot Valley, was in the territory claimed by the Flathead. Their origin and the date of their arrival is unknown at this time.

5. Gaps in Knowledge of the Prehistory

A number of gaps exist in our knowledge of the prehistory of this section. It may prove useful to identify these gaps and suggest some strategies to address them.

a. Surveys

Several areas have been inadequately surveyed. A more detailed survey of the Bitterroot Valley is needed, particularly as the valley floor and foothills become more developed. The Bitterroot Divide could also be inventoried south of Lolo Pass. Particularly emphasized should be passes crossing into Idaho, as these are likely to have relatively high site density. The Sapphire Divide has been surveyed, but only in piecemeal. Additionally, Fredlund (1970) surveyed portions of the Sapphire Range, but there are no site forms or documentation of areas where he worked. Larger areas on the main divide and larger ridges extending off the divide, the south side of the Clark Fork between the Milltown Dam, and Rock Creek also need to be inventoried. Griswald and Larom (1954) noted that they did not pay much attention to this area because of the difficulty in access and perceived a lack of sites because of topographic differences.

A differing survey strategy in both the Flint Creek and Rock Creek areas would probably produce substantially different results than either Flint's (1982) or Keyser's, et al. (1974) work. On a final note, smaller cultural resource management surveys should be coordinated into a larger more integrated survey framework, particularly small contract and highway inventory reports.

b. Excavations

Relatively few excavations have been conducted in this section. The largest is Big Creek Lake (which is also the largest contract excavation to date). Likely candidates for excavation include the rock shelters in the southern Bitterroot, the Zaug farm site (if it still exists), Waldbillig, the mouth of Rock Creek, and perhaps more extensive excavations at sites in the Flint Creek Valley and John Long Mountains. In addition, more extensive tests are needed at sites throughout the entire section and in those topographic locations which might contain sites, such as saddles.

c. Site Types

Although a variety of site types are present in this section, other types for instance, true caves, are not represented. Two medicine trees have been identified; one in the Bearmouth area (Flint, 1979), and the other in the Bitterroot (Weisel, 1951). Absent are Plateau style pit houses and associated large fishing complexes. Other evidence of habitation structures are also extremely rare. For example, only a few teepee rings are known from the Bitterroot Valley; none are known from the Clark Fork, Rock Creek, and Flint Creek Valleys. The question is what type of structure was used for habitation. Also lacking as yet, are large lithic scatters with definite activity areas. These would be expected more in the vicinity of large quarry sites, particularly in the northeastern portion of this section. Surprisingly lacking is any evidence of communal kill sites. There is no evidence of drive alignments, or talus pit hunting blinds, or large bone beds associated with this type of site. It is possible to account for this lack during the Late Prehistoric Period, since the large bison herds were east of the Continental Divide. However, the lack during earlier periods is a question that needs to be addressed.

d. Chronology

There are major gaps in the chronological sequence of this region. One reason is that stratified sites are absent or at least have not been excavated. The suggestion that projectile point styles may date later here than similar ones found further east also makes dating difficult. The current lack of definite Paleo-Indian Period sites in the area would make any future sites discovered from this period extremely significant. However, we believe, based upon the glacial geology and other environmental factors, that sites from this period could be found in the area. Early Archaic materials also appear to be absent in the Bitterroot Valley. On the other hand, Oxbow materials are known to occur in the Flint Creek drainage but from nowhere else in the area (Flint, 1980). Conversely, McKean lanceolate points are known only from Big Creek Lake (24RA34) but not elsewhere. Pottery is known from Bearmouth pictograph site (24GN1001) (Taylor, 1976), but virtually nowhere else in this section. Finally, the ethnic affiliation of particular late prehistoric points needs to be identified. The following is a summary of the chronological gaps that exist in this section.

1) Paleo Period

More sites dating from this time period need to be located and reported. The role of Lake Missoula, particularly in the Bitterroot Valley, needs to be assessed during the earlier portions of this period. Perhaps focusing future

surveys along the predicted shoreline of Lake Missoula as well as the possible islands and peninsulas could answer these questions.

2) Early Plains Archaic Period

Sites which date from this period need to be located and excavated. The distribution of certain types of projectile points, such as Oxbow, needs to be traced, and their lack in some areas needs to be discussed. The effect that the altithermal had on populations during this time needs to be examined in much greater detail. Also important is whether Bitterroot style projectile points occur in this section. The possibility of an increase in the use of high altitude sites during this time period needs to be examined.

3) Middle Plains Archaic Period

The distribution of projectile points dating from this time period needs to be traced. A site with datable materials from this section would resolve the temporal placement of points which are thought to date from this period.

4) Late Plains Archaic Period

Sites dating from this period need to be examined to see how they fit into the larger perspective of the Pelican Lake Phase. Also, the extent to which corner-notched projectile points extended into the Late Prehistoric Period needs to be assessed, as well as the extent to which climatic factors would have become more favorable to occupation of previously drier areas. The relationship between Pelican Lake, Harder, and Elko projectile point styles needs to be examined, particularly in terms of overlapping cultural boundaries.

5) Late Prehistoric Period

Sites dating from this period are relatively common. The introduction of the bow and arrow needs to be determined. The arrival of various ethnic groups also needs to be examined to see if any specific artifact assemblages can be linked to certain cultural groups.

e. Other

One serious gap in most reports is the lack of presentation of any form of raw data. The Bearmouth pictograph article (Taylor, 1976), for example, says pottery was found, but does not say how much. Better reporting of raw material types and artifact content of sites is needed before meaningful and accurate statements about this section's prehistory can be made.

6. Summary

Section II contains a large number of prehistoric sites that may date from the Paleo Indian to the Early Historic periods.

Glacial Lake Missoula inundated this section until approximately 13000 years ago to an elevation of about 4200 feet above sea level. The affects this lake had on any prehistoric inhabitants is unknown at this time.

Most site types discussed in chapter VI have been located in section II. The only exception is pithouse village sites. Also, conspicuously absent are sites that contain structural remains of dwellings such as teepee rings, etc. However, both of these site types occur in areas conducive to use by modern agriculture. It is possible that many of these sites, if they existed, have been destroyed by modern farming practices.

Ethnographically, this section was occupied by the Flathead Indians who viewed the country as their traditional home area. The Northern Shoshone, as well as other plateau groups such as the Nez Perce, passed through this area during the proto and early historic periods enroute to the plains to hunt buffalo. The relationship between the ethnographic and archeological records need to be examined in greater detail for this section, perhaps building upon earlier work done by Flint (1983).

Finally, perhaps the most pressing need for section II is that a stratified site that contains intact, datable deposits (such as the West Fork Rockshelter 24RA36) is at least partially excavated in the near future. This is essential for the accurate chronological placement of recorded sites as well as to more fully understand the temporal framework and adaptive stragegies of the early occupants.

7. Future Research Questions for Section II

Some of the research questions archeologists should consider for interpreting prehistoric sites in this area are as follows:

a. How did Glacial Lake Missoula affect prehistoric use patterns in this area? Was the lake a draw for prehistoric populations or was it an obstacle?

b. Can archeological evidence be used to settle the disputes about the chronology of Glacial Lake Missoula? Did the last draining of the lake occur 13000 years ago as many geologists believe or was it later?

c. How were the valley and riverine areas used by prehistoric people compared to the mid- and high-altitude areas? Did use of these areas change over time?

d. Does evidence for travel corridors occur primarily in the valley bottoms or in the uplands along the major ridge systems?

These are some possible research questions that could begin to be addressed with the existing data base from this area. Appendix No. 2 displays the prehistoric sites recorded within Section II of the study area.

D. Section III - Clearwater and Blackfoot Rivers

This section is a large and diverse area. It consists of mountains, valleys, and large lakes. The area itself runs from the Continental Divide on the east, southward to the Blackfoot River, along the Blackfoot to the junction of the North Fork, southward through the northern half of the Lubrecht Forest, the entire Potomac Valley and surrounding mountains, back to the Blackfoot River at Johnsrud Park, and along the Blackfoot River to the confluence of the Big Blackfoot and Clark Fork Rivers. From this point, it runs over a couple of mountains into the Rattlesnake River. It runs from the Rattlesnake northward along the eastern boundary of the Flathead Indian Reservation to the Swan/Clearwater River Divide. Then runs eastward and southward through the Bob Marshall Wilderness addition to the Scapegoat Plateau. Figure 13 shows the actual area discussed in Section III. There have been previous investigations throughout the entire section. In a number of cases, these investigations date back to the 1950's and 1960's. Information in some of the reports from this section are available virtually nowhere else. Ethnographically, the section was utilized by various eastern Salish people whose group, however, remains to be documented. This chapter briefly summarizes the environment, previous work, and the ethnographic inhabitants in order to set up a framework for interpreting the prehistoric cultural resources that have been found in the section.

1. Environmental Setting

Taken as a whole, the section is typical of western Montana. That is, there are north-south trending mountain ranges interspersed by narrow valleys cut by rivers or larger streams. Occasionally, these open up into broader valleys which are usually labeled as "prairies, flats, meadows, and valleys." All of this section shows evidence of Late Pleistocene glaciation, either in the form of Glacial Lake Missoula or alpine glaciers. Despite these similarities this section can be broken down into a series of smaller (micro) environments. These are: east-west, the Scapegoat, Upper Blackfoot River Valley, Clearwater River Valley, Lower Blackfoot River Valley, and the Rattlesnake Valley. Each of these is discussed separately.

a. The Scapegoat Plateau

The Scapegoat lies along both sides of the Continental Divide in west-central Montana. The elevation ranges from 5000 to over 9000 feet above sea level. The Scapegoat can be divided into two landforms: 1) steep forested mountain areas; and 2) the Scapegoat Plateau. The forested area consists of steep side forest areas bisected by major and minor drainages and long high ridges radiating from the Scapegoat Plateau. The Scapegoat Plateau rises above the surrounding terrain. It is about 5 miles long and averages between one-half to 3 miles wide. The entire plateau is comprised of limestone with krumholtz, fissures, and sinkholes (McLeod, 1981:2).

A variety of fauna is present in the area, including deer, elk, mountain goats, birds, black and grizzly bears, and various small mammals. Bison may have also been on the plateau (McLeod, 1981:2). Fish are present in the larger drainages.

b. Upper Blackfoot River

The Upper Blackfoot is comprised of the Ovando Valley, the North Fork of the Blackfoot River, Klein Schmidt Flat, and northern portions of the Nevada Valley.

The Ovando Valley is a broad bulge in the otherwise relatively narrow Blackfoot Valley. The valley covers 200 square kilometers. The valley extends from the southern end of the Swan Range 12 kilometers south to the northern edge of the Garnet Range. The valley extends 17 kilometers east from a series of small isolated mountains to where it meets Klein Schmidt Flat. The valley itself is diversely quilted with ponds, lakes, hills, and meadows (Dea, 1981:6). This valley was intensely glaciated. The climate is relatively dry (mean annual precipitation is 43 centimeters). Vegetation in the valley is short grass and sage brush with scattered groves of trees in higher moraines (Dea, ibid.:7-8).

The North Fork of the Blackfoot River, a major drainage of the Blackfoot River, is an incised large stream. It is a major drainage of the Blackfoot River. This area alternates between grassy meadows and fairly narrow, steep drainages (Matthew and McLeod, 1984). Klein Schmidt Flat, in general, resembles the Ovando Valley. However, the valley is better watered, probably because of the presence of the North Fork of the Blackfoot River.

The northern portion of the Nevada Valley is characterized by "a fairly dry environment," except along the Blackfoot River which contains extensive riparian vegetation. This area is located north of the Blackfoot River and is characterized by several large lakes. There are extensive deposits of tertiary valley fill and sediment gravels that may have served as raw materials sources (Cameron, 1984).

With the exception of tapirs, the past fauna from this area is similar to that described for the Scapegoat. However, since the area was more open, it would have been conducive to larger population of herd animals such as bison or antelope. There is some evidence to suggest that these animals occurred at least prehistorically and in the early historic period (Cameron, 1984).

c. Clearwater River

The Clearwater Valley is a narrow 45-kilometer long valley, bordered on the west by the glaciated Rattlesnake Mountains and on the east by the Swan Range (Dea, 1981:7). There are a number of lakes in the area. Most of these are considered to be oligotrophic (cold and infertile) (USDA, 1980). This area has also evidenced extensive glaciation (Weber and Witkind, 1977). Again, the fauna is likely to be similar to that found in the Scapegoat.

The Lower Blackfoot consists of valleys dissected by narrow canyons of the Blackfoot River. Some areas such as Ninemile Prairie show signs of extensive glaciation, which is however, overlain by Glacial Lake Missoula sediments. The entire area was once covered by Glacial Lake Missoula, as evidenced by faint shorelines up to the 4000 feet elevation (Weber and Witkind, 1977:4). The valley narrows with a low rugged mountain mass separating it from Camas Prairie. Open grasslands occur in the prairie areas with coniferous forests in the surrounding hills. Unlike other areas nearby, Ninemile prairie contains large amounts of camas. This would have been the focus of aboriginal occupation of the area. The junction of the Blackfoot and Clark Fork Rivers appears to

have moved about 100 yards from its original location (Griswald and Larom, 1954:11). Fauna in this area is probably similar to that in the Scapegoat, perhaps with fewer large carnivores such as grizzly bears, although this may be due to settlement rather than natural conditions.

d. Rattlesnake Creek

The Rattlesnake drainage is a typical large western Montana creek valley. The creek heads in several cirque lakes flowing through a relatively narrow canyon for more than 20 miles to where it meets the Clark Fork River. The creek has carved its present bed through thick deposits of glacial outwash (Taylor, 1974:83). Vegetation consists of ponderosa pines, other conifers, thickets of elderberry, and chokecherry bushes and other shrubs. Wildlife resembles that found elsewhere in this section, but may date earlier in the Rattlesnake than elsewhere in this section.

2. Synopsis and Review of Previous Investigations

Academic investigations in this section began fairly early in the study of western Montana. Professor Morton Elrod photographed what he labeled as "Indian mounds" near Potamac, Montana, around the turn of the century (Malouf, 1979). The next study was in the early 1950's. J. Rukin Jelks (n.d.) recorded sites in the Upper Blackfoot River (Ninemile prairie and Greenough, Montana). Following this, Griswald and Larom (1954) recorded pit features near Potamac and noted that the Blackfoot River was on the Salish Great Road to the Buffalo. Napton and Carmichael (1964) surveyed and recorded a number of sites throughout this section. This area's eastern boundary may have also been included in Napton's summit survey (Napton, 1965), but documentation to confirm this is lacking. Tro and Tro (1968a) spent several days surveying and 1-day testing along the Clearwater River. A wide variety of cultural material was recovered. O'Brien (1974) surveyed and Smith (1974) tested the Nordhaus site (24MO1003). Scott (1981) surveyed portions of a fishing access site for the Montana Department of Fish, Wildlife, and Parks. Cameron (1984) has completed a survey of the Nevada Creek drainage just south of this section. More recently, the Department of Anthropology, University of Montana, has tested a prehistoric site near Placid Lake. A report on these excavations is forthcoming (Schwab personal communication). The major projects from within this area are discussed in greater detail below.

a. Ninemile Prairie and Greenough, Montana Jelks (1950's)

Jelks (n.d.) appears to be one of the earliest workers in the area who was explicitly interested in prehistory. Although the exact date is uncertain, it is thought that he did his work in the early 1950's. Most of the area he considered was near Greenough, Montana. A total of eight sites was located, all of these appeared to be open-air occupation or lithic scatters. These sites were located by questioning local informants and some on-the-ground survey by the author. Most of the sites were found near the confluence of streams and rivers or along the rivers themselves. It is interesting to note the use of photographs of artifacts in a report this early. This makes identification of projectile point types, etc., much easier than the line drawings in other early reports. Projectile points range from the Early Middle Period (Oxbow) to Late Prehistoric Period arrow points. Several of the sites in this report appear to have been relocated by others. The report taken as a whole is quite good. Its

major shortcomings are the lack of detailed description of methodology and the inclusion of selections from John Work's journals that have nothing to do with the rest of the report. The collections from this survey apparently are in a private collection. Their whereabouts is unknown.

b. Upper Blackfoot River Survey (Napton and Carmichael:1964)

The next major project undertaken in this section was a survey of the Upper Blackfoot River by University of Montana graduate students G. Alan Carmichael and Lewis K. Napton (Napton and Carmichael, 1964). This survey was conducted partly for credit and partly to help Carmichael in his thesis research (Carmichael personal communication). The report of this survey consists almost entirely of maps and site forms. The survey area ranges from the Douglas Creek drainage to the junction of the Big Blackfoot River with the Clark Fork River. Most of the survey focused on the area around Helmville, Montana. A total of 20 sites were recorded and of these, seven were recorded in Section III. More than 20 sites were found but since the records are incomplete, further information is lacking. The artifacts are also apparently lost. This report lacks any description of methodology. It would appear that the survey was based both on information provided by local informants and actual field search. Projectile points range from possible Paleo Indian period (Carmichael personal communication) to the Late Prehistoric. There are no illustrations of any of the material recovered. Part of the Nevada Creek survey (discussed below) was to relocate and rerecord a number of the sites in this survey, but with only 30 to 50 percent success. In some instances, the 1983 resurvey failed to locate features mentioned on the site form but did locate the site itself. Because the original report consists only of site forms, it is difficult to use. However, none of the material collected is housed at the University of Montana, which was the survey's sponsor.

c. Camas Prairie (R. Malouf 1979)

Richard Malouf (1979) excavated several root roasting pits near Potomac that he felt were associated with the preparation of camas. This report sought to correlate the ethnographically known use of camas with archeological information, which it does very well. It is the only report that addresses food preparation in Section III. The major criticism of this work is that the archeological material might have been better incorporated into the text. The roasting pit sites themselves are located near camas fields as well as near timbered areas. Some of the pits used were cleaned out possibly for use while others contained abundant fire-cracked rock and charcoal. The reason for the difference is unclear.

d. Clearwater River (Tro and Tro 1968)

Tro and Tro (1968a) spent 15 days surveying and a single day testing sites on the Clearwater River. This report illustrates the artifacts found and lists in tabular form all lithic material recovered. The report focuses on two sites. Differences in lithic raw material distribution are also noted. Again, the present whereabouts of the materials collected from the excavations and surveys is unknown. One of the reasons this site was tested and the general area surveyed was because of the adverse impact by modern campers. Almost all of the cultural material was located on four ascending terraces along the Clearwater River. The majority of cultural material recovered came from the first of these

terraces. The survey itself recovered over 1100 cultural items. The projectile points recovered from the sites appear to date from the Late Middle Period or Late Prehistoric Period. This report is most useful, simply because it is one of the few published reports from the Clearwater River.

e. The Nordhaus Site (Smith, 1974, and O'Brien 1974)

The Nordhaus site, near Johnsrud State Park, was located and tested by University of Montana Highway salvage crews (Smith, 1974, and O'Brien, 1974). Although this site is on the Salish "Great Road to the Buffalo" (Griswald and Larom, 1954), very little cultural material was recovered.

f. Scapegoat Wilderness Area Cultural Resource Assessment (McLeod 1981)

Following testing at the Nordhaus site, little work has been done in this section other than Forest Service surveys. An example of these projects is the Scapegoat Wilderness Area, Cultural Resource Assessment, Lolo National Forest (McLeod, 1981). This project was undertaken to see if archeological sites were present and to gather enough data, if possible, to predict areas that may hold a high site density. Other objectives included establishing a chronological framework in which to place prehistoric materials recovered. Most of the survey was spent evaluating previously recorded sites and locating new ones. Four prehistoric sites were located. Three of these were previously recorded by an amateur archeologist involved with grizzly bear studies in 1977. The projectile points recovered from the above- mentioned sites range from Early to Late Archaic. All of the sites were located on the Scapegoat Plateau. Other areas that may have contained prehistoric sites were checked with negative results, however, vegetation may have been a factor in obscuring sites. This is the only survey conducted in the Scapegoat Wilderness Area, so the results are difficult to assess, due to lack of comparable data.

g. Aunt Molly's Fishing Access Site (Scott 1981)

The next project was conducted east of the section boundary, but is included here because of the paucity of information from this section and the information contained in the report. Ms. Sara Scott, then of the Montana State Historic Preservation Office, surveyed 1100 acres near the junction of Nevada Creek with the Big Blackfoot River and in the vicinity of Brown's Lake. This survey was undertaken as a compliance survey for the Montana Department of Fish, Wildlife, and Parks. All of the sites located received detailed examination as to their National Register status and excellent descriptions of the sites' contents. In fact, no new data was added by the Nevada Creek survey, except lithic coding sheets (Cameron, 1984). A total of 12 archeological sites were located, generally near fairly large bodies of water such as Nevada Creek, Big Blackfoot River, and Brown's Lake. Test excavations were recommended for 10 sites in order to assess their eligibility for the National Register. Two sites were found to be eligible; however, further work was needed to establish boundaries and cultural affiliations. Diagnostic projectile points at this site range from Late Paleo (Plano) Agate Basin to Middle Middle Period McKean. An oxbow projectile point was also found. All of the artifacts collected during this survey are currently curated at the Montana Historical Society.

h. Other Fishing Access Sites (Aaberg 1984)

Aaberg (various) has also surveyed and tested several fishing access sites and state parks such as the County Line Fishing Access site (Aaberg, 1984a) and Johnsrud Park (Aaberg, 1984b). These are compliance surveys for the Montana Department of Fish, Wildlife, and Parks. The County Line Fishing Access site is a buried occupation site and is located on two terraces--a high inactive terrace, and a lower terrace actively undergoing erosion. A total of six shovel tests was excavated, and cultural material was found to a depth of 60 centimeters on the lower terrace. This site was recommended as eligible for the National Register. No diagnostic material was located; therefore, no date could be assigned to the site. The artifacts recovered from the test units are probably curated at the Museum of the Rockies. Johnsrud Park was tested in a similar fashion to that described above; however, this site might contain more than one component. The first component Aaberg believed dated from the Besant phase (ca. AD 400-700) due to the presence of a tan chert, side-notched projectile point. This is one of the few known besant points from Section III. The second component of the site is thought to be protohistoric, based on flakes and retouched pieces of glass. Again, this is the only known occurrence from this time period in this section. More extensive testing was recommended for the site. The site was thought to be eligible for the National Register. Both of these reports are among the most recent for this section; they are explicit in their detail and include discussions of eligibility, which most reports from this section lack.

i. Nevada Creek Archeological Project (Cameron 1984)

The most recent major project in this area also occurs east of the boundary of this section. The Nevada Creek project is unique in that it was designed to examine only previously recorded sites; it incorporates extensive geological research into the design of the project. This project was implemented because the Nevada Creek Valley is eventually slated for intensive energy development and other impacts. Most of the fieldwork consisted of detailing the lithics found at relocated sites. A total of 20 sites were relocated, 22 were not relocated, and six previously unrecorded sites were found. Most of the sites examined were selected from information on previous site forms, which were not always accurate. One interesting aspect of this survey was that no material was collected. All of the sites examined were prehistoric lithic scatters, although a few buried sites were also noted. Artifacts ranged from Late Paleo to Late Middle Prehistoric. Sites were located in an amazing variety of topographic settings with no single environmental factor attributable to their location. At least one National Register district has been proposed for the area covered by the survey. This area, to date, is the only proposed prehistoric National Register district in west-central Montana. The eligibility of all other sites was also assessed. There is some suggestion that the low frequency of tools in the area may be due to previous collecting rather than lack of production. Petrographic analysis of artifacts with raw materials from known quarry sites allowed identification of the source of artifacts from sites in this area (Fields 1984).

J. Rattlesnake Creek (Taylor 1974, Foor in progress)

The Rattlesnake drainage has received limited attention from archeologists in the past. One prehistoric campsite/lithic scatter (24MO1081) was recorded by a local amateur archeologist in the early 1970's. Also during about the same period, a prehistoric burial was unearthed during pipeline construction in the lower portion of the drainage. Unfortunately, some of the site was initially excavated by local law enforcement officials who had suspected foul play. Once the officers realized the burial was of antiquity, it was reported to the University and subsequent excavation was conducted.

A single radiocarbon date of 490± 160 B.P. (A.D. 1460) (GX 2976) was obtained on bone from the burial. Grave goods accompanying the burial include 2 chipped stone scrapers, a bone whistle, and 24 curved pieces of worked bone that fit together to form hoops. Six and seven of these are possibly represented. Analysis of the skeleton shows it to be medium stature, broad shouldered, male of Native American (Mongoloid) origin. The age of the individual was estimated at 25± 3 years (Taylor, et al., 1974).

McLeod summarized the prehistory of the area in a brief overview written in 1983 for the Environmental Impact Statement prepared once the area was designated wilderness and a National Recreation Area. The University of Montana Department of Anthropology under the direction of Dr. Thomas Foor has begun a multiyear site inventory and evaluation project under permit from the Lolo National Forest. This ongoing effort should greatly increase our understanding of site densities and land-use patterns for this area in the near future.

3. The Chronological Framework

The materials from this area show strong orientation to the Plains further east. All time periods found in western Montana are represented with earlier (Paleo Indian and Early Plains Archaic sites) ones being found in greater numbers than elsewhere in the western part of the State. This section briefly summarizes the chronological placement of sites in Section III. Portions of this area have figured prominently in much of Reeve's (1969, 1983) work and his scheme will be used.

a. Early Prehistoric Period (10000-5500 B.C.)

Several sites dating from this period are known. Most of the material attributed to this period is identified as being in the Agate Basin/Hellgap Complex (6500-5500 B.C.). Since most of these are surface finds, dating is by projectile point typology and tentative at best. Sites include 24PW340, 24PW202, 24MO502 1/, Seeley Lake (Malouf, personal communication), and 24PW113. Most of these are located slightly east of the section. Although the Avon site has been excavated, the site has not yet been reported in sufficient detail to make comparisons possible.

1/ Uncorrected site number.

b. Middle Prehistoric Period (5500 B.C. - A.D. 200)

There are large numbers of sites dating from this time period in this section. However, no sites have been identified as containing Mummy Cave Complex (5500-3500 B.C.) materials. Napton (Melton, 1983), however, states that there are Bitterroot points from the Avon site (24PW340). There is a possibility that from sites 24LC401-403 on the Scapegoat Plateau. Additionally, there may be some relationship between the Scapegoat material and similar material from the Mount Albion Complex further south (cf. McLeod, 1981). Materials dating from the Oxbow Complex (3500-2500 B.C.) are fairly numerous in this section. This area also includes one possible quarry site. Again, most of these artifacts are surface finds, so chronological placement is tentative. Sites with Oxbow points include BFI (Jelks, n.d.), 24PW1035 and 24PW1038 (Cameron, 1984), 24LC401-403 (Craighead, unpublished photographs), Placid Lake (24MO197), and 24PW20 and 24PW239 (Cameron, 1984). McKean (2500-1500 B.C.) and Hanna Phase (1500-1000 B.C.) are known throughout the section. Again, there is as of yet no excavated context in which to place this material. These points have been identified in the Blackfoot (Jelks, n.d.), the Clearwater River (Tro and Tro, 1968a), the eastern edge of the section (Scott, 1981, and Cameron, 1984), Placid Lake, and the Scapegoat Plateau (McLeod, 1981). Pelican Lake points are also numerous in this region. Pelican Lake points have been identified or illustrated in almost all surveys conducted in this section. The only exception being Napton and Carmichael (1964), who did not illustrate any of the artifacts they recovered. It is most likely, however, that their survey included points attributable to Pelican Lake, but not described as such. Reeves (1972, 1983) has documented the presence of large quantities of "Avon chert" in assemblages throughout southwestern Alberta during this time. The source of this material is immediately southeast of Section III. There is some suggestion that most of this section may have served as a corridor (particularly in the area around Seeley Lake and the Clearwater River) to exploit this raw material, particularly during the Pelican Lake phase when exploitation reaches its maximum. However, sites from this section show only low frequencies of Avon chert, suggesting that this hypothesis should be reevaluated. An excavated site assignable to this phase would be helpful in evaluating this hypothesis. Reeves (ibid.) suggested that this phase may end later, since no sites are dated from this section. This suggestion is as of yet unverifiable.

c. Late Prehistoric Period (A.D. 200-1700)

The Late Prehistoric is underrepresented in this section. Cameron (1984) has suggested that this might be due to arrowhead collecting activities rather than lack of occupation. One site within the section and several just to the east have produced Besant points. These are 24MO1084 (Aaberg, 1984), Avon site (Cameron, 1984), and Avon quarry site (Reeves, 1983). The Avon site is the only one that has been excavated. The appearance of true arrow points is generally thought to occur with Avonlea points. These have been identified at only one site in this section, an uncontrolled surface collection at Placid Lake. Avonlea materials might have also occurred further east at the Avon quarry site (Reeves, 1983). Other Late Period points, such as Washita, have also been identified from this section (Napton and Carmichael, 1964). No sites from this period have been excavated; however, Malouf (1952) suggested that portions of this region were more heavily exploited at this time than in previous periods. A note appended to the site form for 24PW329 south and east of the section's

boundary states that pottery was once found in this site. Its presence then should not be unexpected, and if found it would date to this period.

One site dating from the Protohistoric Period is known from this section, 24MO1084. Flaked glass in association with flaked stone were found subsurface. Since this is on the Salish "Great Road to the Buffalo," the chances of encountering sites dating from this time period are fairly high.

4. Ethnographic Framework

This geographic section was primarily occupied by various Salish groups. The three major ones were the "Sem 'tuse, the Upper Pend d'Oreille, and the Flathead. It is likely that all three occupied the area fairly late, although Teit (1930) has said this territory belonged to the Sem 'tuse. Turney-High (1937) went to some length to point out that the Sem 'tuse may not have been an actual "tribe." However, several of Teit's observations seem to fit archeological observations, particularly the observations on the black stone used for tools. Teit felt that this might be obsidian, but Choquette and Holstine (1982) suggested that it might be basalt. Basalt makes up the dominant percentage of collections in portions of this section. The Sem 'tuse were believed to have been exterminated by a smallpox epidemic prior to white contact (Teit, 1930).

Following this, the section was occupied by the Flathead and Pend d'Oreille. The Flathead used the area as a source of camas. Malouf (1979) noted that the Flathead dug camas at Camas Prairie, Placid Lake, and Seeley Lake, but he was unable to determine if the latter two sites were used prehistorically as well as historically. Additionally, the Blackfoot River served as the Salish's "Great Road to the Buffalo" (Griswald and Larom, 1954), and this would have made this section a fairly heavily traveled route.

Also using this route were Blackfoot raiding parties. This would have affected the times when the Camas Prairie was in use, particularly if the camas gathering parties were small. Malouf (1979:45) noted that during the early 1800's this area was avoided by western tribes because of Blackfoot depredations.

Although the ethnographic record cannot be used in one-to-one correlation with the archeological record, it could be used to see if there were intertribal boundaries in this section.

5. Gaps in Knowledge

There are several major gaps in the data base for this section; including areas not surveyed, sites excavated but not reported, and gaps in the chronological record. Each of these is discussed in more detail below.

a. Surveys and Excavations

A number of areas within this section have yet to be surveyed. Most of these lie on private land or in wilderness areas. In a few instances, limited surveys have been undertaken in the Lower Rattlesnake and on the Scapegoat Plateau. These, however, have focused on only small areas within the wilderness areas. Although the Lower Clearwater River may have been included in Napton's (1965) summit survey, no documentation exists to show that this was the case. The area

should be surveyed. The Clearwater drainage should be systematically examined, particularly around lakes such as Seeley Lake, Lake Alva, etc. Other areas which need survey include portions of the Lubrecht Forest, most of the Potomac Valley (particularly as sites are being located in greater numbers by amateurs), portions of the North Fork Valley, the Ovando Valley, and Ninemile Prairie. One thing lacking in most surveys is any definable survey strategy. In fact, in some instances there does not appear to be any rationale at all for the survey.

b. Site Types

Several site types have not been recorded in this section, including any form of kill sites, stone circles, large quarry sites (although these occur to the south), pit houses, rock shelters and caves, pictographs, cairns, and religious sites. The predominant site type is the small lithic scatter, either as surface manifestations or subsurface. For example, recent excavations by the University of Montana at Placid Lake found cultural material to a depth of 90 centimeters (roughly 3 feet) below the surface. The apparent absence of other site types is difficult to explain. At least caves and rockshelters could be expected to occur in areas that have geologic formations conducive for these sites. Perhaps the problem is inadequacy of survey strategies, as these sites types can occur away from water and on slopes greater than 30 percent (Taylor, 1984:3), areas which might not be included in some surveys. The reasons that stone circle sites do not occur in western Montana has long been a perplexing question. They are known to occur at one site south of Section III in fairly large numbers (20+) (Cameron, 1984). Other site types may also occur, but some associations normally found with these sites do not appear to be present, such as scarred trees, and they appear underrepresented in this section. One factor that may have influenced the way sites have been recorded is what surveyors (site recorders, if you will) have been trained to look for specifically. Some site types are not easily discernible, unless one knows what they are looking for, and it is entirely possible that some site types like roasting pits may have been unknowingly missed.

c. Chronology

This section appears to be chronologically well represented. In fact, it contains a greater number of early period materials and a wider variety of projectile point types than other sections. However, later time periods appear to be underrepresented, particularly in light of the suggestion that this area became more heavily exploited during later time periods. One question that needs to be addressed is whether there is any noticeable increase in Pelican Lake materials over earlier occupations, and perhaps if this is related to the exploitation of lithic raw materials found to the southeast of the section. The presence of a single Besant point needs to be assessed in much greater detail. Although Besant is present in western Montana (see Prehistoric Lifeways), a context for its occurrence needs to be established. This could best be done by excavating a stratified site somewhere within this section (admittedly, this assumes that there is indeed one present). Further documentation of Besant and other projectile point types in private collections also needs to be undertaken, an investigation which might increase some of the underrepresented types and periods.

d. Other

A number of sites have been reported in the literature but exist nowhere else. Inasmuch as these are the only source for some of the sites, and most of the reports are relatively unavailable, it makes the analysis of projects difficult. In a number of cases, these sites may no longer exist, therefore, the presence or absence simply needs to be verified. A small number of sites have been excavated from this section, several of which have not been reported in any detail. This, while not easy, also needs to be rectified.

6. Summary

Section III is one of the richest archeological areas in western Montana in terms of numbers and types of sites. Chronologically, all of the major prehistoric periods are represented. Ironically, however, the earlier periods appear better represented than the later ones. This is the reverse of the trend seen elsewhere on the Forests.

Ethnographically this study section was used and occupied by various Salish speaking groups such as the Flathead and Pend O'reille. The Blackfeet were also known to frequent this area during the early historic periods.

Most of the site types discussed in Chapter VI are found in here. However, again dwellings or evidence of structures is conspicuously absent in the archeological record. Many of the significant quarry sites in western Montana, as well as stone circle (teepee rings) sites lie only a few miles south of Section III near Avon, Montana (Cameron, 1984).

One stratified site is currently being excavated near Placid Lake by students from the University of Montana. Hopefully, a detailed report with subsequent radio carbon dates will be the result of this project. This information, and similar types from other sites, is essential to establish an accurate temporal framework and adoptive strategies of the prehistoric inhabitants of this area.

7. Future Research Questions for Section III

a. How were the upland environments used by prehistoric people? What was the function of high altitude sites such as those in the Scapegoat and Bob Marshall wilderness compared to those in the major river valleys?

b. Can distinctive raw material types and artifact types demonstrate patterns that could identify a seasonal round? And, can this seasonal round be linked to specific temporal periods?

c. Where is the raw material types basalt, obsidean, cherts, etc., coming from? Is it found within or just outside the area or is it being imported from great distances?

d. How did the major river valleys such as the Blackfoot, Seeley-Swan, and Clark Fork function as travel corridors? What evidence currently exists to suggest they did? And, what other types of evidence are needed to more accurately determine their role as travel corridors?

Appendix No. 3 displays the prehistoric sites recorded to date in Section III.

E. Section IV - Lower Clark Fork and Flathead Rivers

This area consists primarily of the Lower and Middle Clark Fork Rivers, the Thompson River, the Bitterroot Divide, the Ninemile Valley, and some portions of the Lower Flathead River. A number of diverse environments are present. The section contains many areas with high site densities, occasionally in unexpected locations such as the Bitterroot Divide. The exact opposite occurs along the Lower Clark Fork River where only a few sites were located. Work was begun relatively early in this area and has continued on a more or less intermittent basis ever since. Ethnographically, the eastern Salish or more specifically the Pend d'Oreille inhabited this section. There are a number of unpublished reports in this area which contain information not available elsewhere--reports which could change the current views about the area's prehistory.

The framework for interpreting the prehistoric remains in this section includes a summary of the environment, previous investigations, cultural chronology, and the section's ethnographic inhabitants.

1. Environmental Setting

The environment of Section IV can be characterized as having steep-sided mountains separated by narrow linear valleys. The notable exception to this is the Ninemile and Missoula Valleys. These are somewhat larger valleys and have drier central floors (Crowley 1977). The valleys and surrounding mountains can be separated into several different sections. These are: the Middle Clark Fork Valley (from approximately Missoula to the confluence of the Clark Fork and Flathead Rivers), the Ninemile Valley, the Lower Clark Fork River (from approximately the Clark Fork and Flathead Rivers' confluence to Lake Pend d'Oreille), and the wetter west end on the St. Regis River drainage (Crowley 1977). This area is part of the Columbia Rockies Region and each section will be described in greater detail (Crowley 1972).

The entire area shows evidence of late Pleistocene glaciation either in the form of glaciated mountain regions or Glacial Lake Missoula. The latter tends to dominate the topography of lower elevation areas, and particularly important to archeologists are the large, relatively high terraces. There is some suggestion that these might have been used by early man (cf. Choquette and Holstine 1982). This, however, remains to be proven. The mountains in this section, while glaciated, do not appear as glaciated as other mountain ranges in Montana. Additionally, the degree to which the mountains rise within the section is also variable. The Bitterroot Range on the west and southern boundaries displays much greater elevation than the mountains along the northern and western portions of the study area (Crowley 1977).

a. Middle Clark Fork River

Ryan (1977) follows Malouf (1982) in designating the Middle Clark Fork River as extending from Missoula to Paradise, Montana. This area can be characterized as steep mountain slopes and a narrow valley floor (Crowley 1977). The mountains dominate the visual perspective, rising abruptly from the valley floor; foothills are lacking. The Clark Fork River is the major water source in the area with all streams flowing into it. Along the river are a series of terrace levels which rise from a few feet to more than 700 feet above the present level

of the river (Crowley ibid.). Most of the archeological sites in this area are located on one or more of these terraces.

Climate, vegetation, and wildlife all change with altitude. Crowley (1977) defines a series of bioclimatic altitudinal zones in Mineral County; most located in this area are drier than those found further west. A variety of plants and animals are present. The aboriginal inhabitants had a thorough knowledge of exploitable plants and animals in the area and made full use of them as far as technologically possible (Ryan 1977). Deer, elk, moose, bear, mountain sheep, goat, and to a lesser extent, caribou were known to be hunted in this area. That deer were perhaps the most important prey species is suggested by Ryan (1977:14) and borne out by excavations recently conducted elsewhere in the Kootenai Region of western Montana. Also present were abundant waterfowl and upland game birds (USDA, SCS 1977). These species along with numerous small mammals would have supplemented the aboriginal diet. Although it is known that fish were exploited and artifacts such as net sinkers are present, the role fish played in the subsistence strategies of early people in this region is still unknown.

b. Ninemile Valley

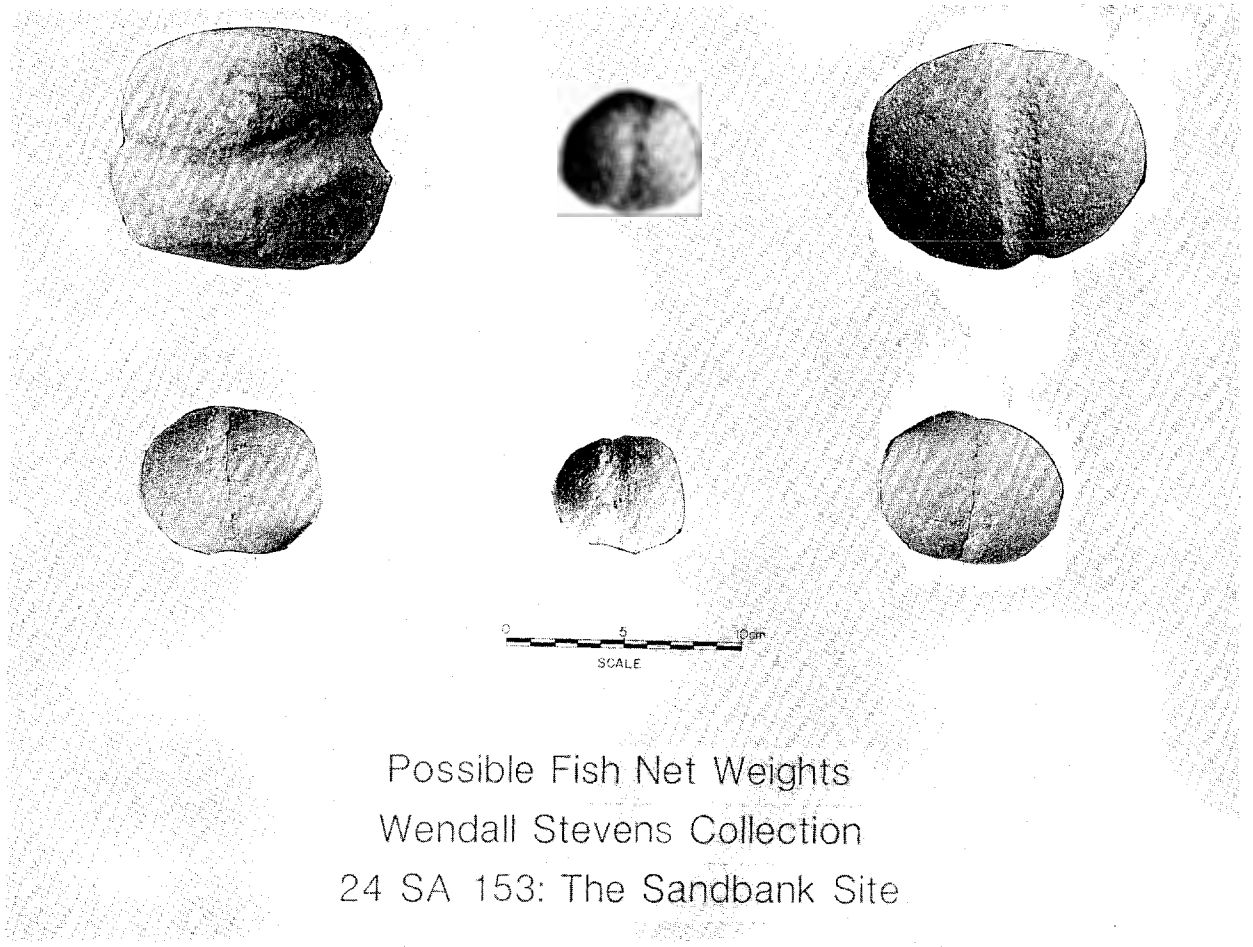
The Ninemile Valley is different from other valleys in this section. It is drier and geologically resembles the broader valleys such as the Bitterroot and Clark Fork Valleys found immediately east. The valley itself can be described as being bordered on the south by the Clark Fork River, the Reservation Divide on the east and northeast, and the Ninemile Divide on the west and southwest (USDA 1976). Ninemile Creek is the largest tributary to the Clark Fork in this area (Ryan and McLeod 1982). The distribution of plants and animals is controlled by elevation. In all likelihood, animals found in this area are similar to those found in the Middle Clark Fork. This area may have been used for camas processing (R. Malouf 1979) which appears to be lacking in other nearby areas.

c. Lower Clark Fork/Lower Flathead Rivers

Malouf (1982:3) defines the Lower Clark Fork River as being the Clark Fork River from its confluence with the Flathead River to Lake Pend d'Oreille. The Lower Flathead River is defined as the Flathead River from its confluence with the Clark Fork River upstream to its confluence with the Jocko River. This area contains both narrow canyons with steep mountain sides and much broader open areas such as those found near Perma and Plains. In general, the more open areas are located north of both rivers in the eastern most portions of this area. Malouf (ibid.) notes that the valleys in the western portions of this area are rocky and narrow, while the adjoining mountains are steep, rugged, and generally heavily timbered. Vegetation in the Thompson Fall's vicinity consists of a mixture of western red cedar and western hemlock climax forest to the north and Douglas fir and grand fir climax forests to the south (Bowers and Horchette 1981:3-2). This association is probably present throughout much of the other western portions of this area.

The flora and fauna found here are similar to that found in the Middle Clark Fork Valley. However, since large game animals like bighorn sheep occur in larger numbers here than elsewhere in section IV, the role they played in subsistence is perhaps greater. Artifacts associated with fishing occur here in

greater numbers than elsewhere and historical accounts (Malouf 1982) suggest that fishing may have been more important here than in adjoining areas.



Photograph No. 4

Possible Fish Net Weights
Wendall Stevens Collection
24SA153: The Sandbank Site

d. Wetter West End (St. Regis River)

The wetter west end encompasses all of the remaining area in Section IV. It is restricted to the western portions of Mineral County south to the Montana/Idaho Stateline. This area is named because of its greater precipitation and it is more humid and cooler. Additionally, this area can be separated by less radical extremes in elevation. This area can again be divided in to several biographic zones based on altitude and exposure. The St. Regis River is the major drainage and of all the nearby streams it has the most extreme fluctuations in flow.

The flora and fauna of this area are not different from other areas. However, this area is more heavily vegetated and consequently is likely to have lower populations of animals than other areas during the prehistoric periods.

The apparent reversal of dates is due to the fact that Ryan used an unpublished copy of Malouf's report which was subsequently published.

2. Synopsis and Review of Previous Investigations

Previous investigations in Section IV have shown that there is a wide variety of sites and time periods present. Most of the work in this area has been surveyed with only test excavations and even fewer full excavations. Archeological work can be divided into four periods: the 1930's, the 1950's, the 1960's to the early 1970's, and 1975 to the present. Each period is discussed below.

a. Period I (1930-1950)

The earliest known archeological work in this section was reported by Turney-High (1937). In his "Flathead Indians of Missoula," he described a prehistoric burial found near Lozeau, Montana. Material recovered from the Lozeau burial included: discodial beads of an unidentifiable nature, dentalicum shells, three tubular beads of sheet copper, one quartz scraper, one obsidian projectile point, one abalone or pelecypad ear ornament, and a large flat point of horn. Turney-High felt that the artifacts clearly demonstrated a maritime (Pacific Coast) affinity. He further noted that the skeletal material was different from the present tribes living in the area in that it was "a physical type more muscular and powerful," (Barnier, 1971:9-10). The present whereabouts of any of this material is unknown. Alan Smith, an ethnographer, who spent time with the Pend d'Oreille Indians also noted the location of archeological sites. Smith prepared an unpublished report, that was not available to the authors, but may contain information on sites within this section.

b. Period II (1950-1960)

The first systematic work in this section was done by Carling Malouf of the University of Montana who surveyed the Cabinet Gorge and Noxon Reservoirs prior to the construction of the two dams. The results of this survey, however, have only recently been published. Malouf (1982) recorded a total of 13 prehistoric sites, including "battle pits," occupation and campsites, and a burial. Diagnostic artifacts that he illustrates show both Middle (forager) and Late period affinities. Other artifacts are thought to be related to the Columbia Plateau to the west and the Plains to the east. Malouf compares his findings to other areas in western Montana. Perhaps the major criticism of the report, however, is that the comparative information is somewhat dated. Malouf noted that this portion of the Clark Fork River may not have been the major east-west thoroughfare as earlier workers had suggested. This is one of the few reports that discusses the Pend d'Oreille Indians in any detail.

A retired Forest Ranger named George Hankenson offered information on sites in the Region that he located during some 40 years of working for the Forest Service (Moomaw, et al., 1952). The sites were located throughout this section, including the Ninemile area near Tarkio, the Stateline area, and Evaro Hill. Sites appear to date from the Middle and Late Periods.

Following Malouf's work, very little was done in the early 1960's. Arthur (1963) reported on the Richardson Farm site near Huson. Projectile points illustrated in the report range from Middle to Late Period. Most of the finished artifacts noted from this site were in the landowner's private

collection. This report is among the first to mention Avon chert as a raw material type and it attempts to identify the location of other chert sources. Camas Creek (Jenni, 1963) is another occupation site that yielded a large number of artifacts in no apparent stratigraphic context. As with the Richardson Farm site, projectile points range from Middle to Late Period. Since so little of this material was in stratigraphic context, the author concludes that the primary value of the study is to give distributional information. Moncure (1962) reported on pictographs near Perma, just north of this section. This pictograph site (24SA1007) contains both zoomorphic designs and tally marks. The author attributes this site to the Pend d'Oreille Indians. He places occupation between 100 to 200 years ago. This report unfortunately suffers from lack of detailed illustration of pictograph panels. The site appears to have undergone severe deterioration since the report was published.

b. Period III (1960-1970)

During the late 1960's and early 1970's, section IV was subject to a fair amount of attention both along the Clark Fork River and in the mountains bordering on both sides of the river. The Ninemile Valley was also surveyed at this time. Each of these surveys are discussed in more detail below.

(1) Middle Clark Fork

Ryan (1977) surveyed and tested along the Clark Fork River. He incorporated the data gathered by this survey into his Master's Thesis, "An Archeological Survey of the Middle Clark Fork Valley: Missoula to Superior, Montana." Ryan reported a total of 36 sites in a stretch of 60 river miles. Artifacts range in age from possible Early (Cascade) to Late Prehistoric. He suggests that the area was first used around 6,000 years ago. Ryan illustrates most of the finished tools which were collected and suggests that they show both Columbian Plateau and Great Plains influences. He concludes that the Middle Clark Fork was an important north-south travel route and that this section of river might have been on an east-west travel route, as well.

William LaCombe (1972) conducted a superficial survey of portions of two areas along the Ninemile and Reservation Divides. A total of eight sites were located. He concluded that sites were actively being destroyed and needed preservation.

(2) Montana and Idaho Stateline Area

Dale Fredlund, assisted by William LaComb, surveyed portions of the Stateline Trail in Montana and Idaho. LaCombe (n.d.:9) states that this area had been actively pot-hunted since the 1910 fire. Fredlund and LaCombe (1971) recorded 48 sites on the trail, four of which were classified as temporary occupation sites. The other 44 were thought to be one of two types of game drives. Fredlund (1970) suggested that the majority of the projectile points located were attributable to the McKean Complex. Others (Choquette and Holstine, 1982) have suggested that the points may also represent earlier time periods. Projectile points illustrated by LaCombe in his report (n.d.) would suggest that in part the McKean Complex affiliation is correct. Fredlund (1970) did, however, note the presence of early point types such as Cascade and Angostura. More recent surveys conducted by Mark Valier (personal communication) and Edgar Bryan (n.d.) have shown that a number of sites recorded by Fredlund and LaCombe

have been totally collected or obliterated. One problem is that most of the reports on this area are not illustrated, making the conclusions about artifact types difficult to evaluate.

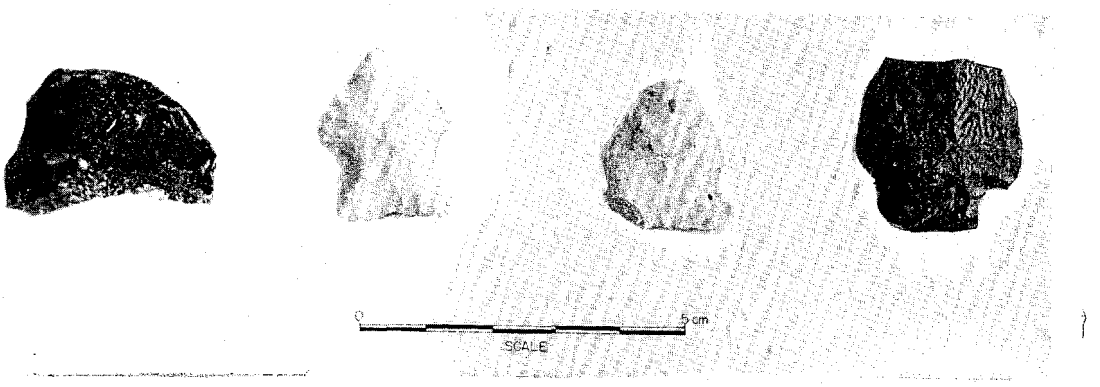
Also, during the early 1970's and continuing up to the present time, cultural resource inventories of various highway projects have been undertaken. The majority of these surveys have been conducted by the University of Montana. Only a few prehistoric sites have been located with even fewer formal evaluations being completed. The reader is referred to the State Highway Department for copies of these reports.

d. Period IV (1970 - present)

This period is basically defined by the work done by the Lolo National Forest Cultural Resource Management staff or by contract for the Forest Service. A more detailed discussion of the activities of the Lolo Cultural Resource Program is found in the "Previous Investigations" chapter of this report. However, several projects merit special attention: The test excavation of the Smokejumper Site (24MO35), the Whitetail Site (24MO48), and the Lolo Trail study.

(1) The Smokejumper Site (24MO35)

The smokejumper site excavations were conducted by the University of Montana. According to Sharrock (1976), this site contained a single subsurface component 18 to 25 inches below the present ground surface. No discernable cultural layers such as living floors were found. A total of 80 square feet was excavated and 100+ artifacts consisting mostly of quartzite debitage (66 pieces) were recovered. The several projectile points which were found suggested Late Middle (1500 B.C. - A.D. 500) Period date for the site occupation. The site was thought to represent a transient, perhaps sequent, campsite on a travel route between the Missoula and Clark Fork Valleys. Sharrock felt that the site did not qualify for the National Register.



Photograph No. 5

Artifacts from Smokejumper Site (24MO35)

(2) The Whitetail Site (24MO48)

The Whitetail Site excavation (Ryan and McLeod, 1982) was one of the larger mitigation projects undertaken by the Lolo National Forest. This project was undertaken to mitigate adverse impacts to the site by reconstruction of Forest Service Road No. 5515. The site had previously been determined eligible for inclusion on the National Register of Historic Places. The report contains an overview of prehistory and history and an environmental description. A total of 18 (1-meter by 1-meter) test units and 10 shovel tests were excavated. Chert and Pine Creek shale made up more than 95 percent of the assemblege. This, combined with the presence of Plains side-notched projectile points, led the authors to suggest that this site dated from the late prehistoric period. The authors conclude that no major questions about the prehistory of the Ninemile area could be answered. However, the report did generate five research questions which only additional excavation in the Ninemile area could answer. Raw material type, frequencies in the various levels are contained in the report, and finished tools are illustrated. This report is one of the better cultural resource reports available for this section.

(3) The Lolo Trail Study

The Lolo Trail study (McLeod, 1982) and other works (McLeod 1980, McLeod and Roenke 1983, and McLeod 1984) incorporate information gathered during the 1977 Lolo Trail project and subsequent work. The Lolo Trail study had three primary objectives. These were: 1) locating the actual trail as it existed on the ground; 2) identifying and evaluating cultural resources that exist along the trail; and 3) developing long-range management guidelines for the trail. Most of the reports contain a section dealing with prehistory and history. The actual fieldwork consisted of on-the-ground survey, archival research, and oral interviews. The survey located only two prehistoric sites and several scarred trees. There are no definite dates assignable to either of the two prehistoric sites. However, recent excavations, one of these at the Howard Creek Site (24MO120), recovered one small metal and several glass trade beads (Light and McLeod, 1984). Numerous small pieces of lithic debitage were also found in association with the beads. Several ideas for future projects were suggested. A surprising result of this study was the lack of prehistoric sites along the trail in Montana. The combined reports that deal with the Lolo Trail all serve to demonstrate how integrated research can be integrated into agency Cultural Resource Management programs.

Two other projects, both conducted north of the area, deserve mention: Ceciel Barnier's study of the National Bison Range and the Lower Flathead Valley, and Malouf's study of the Flathead Indian Reservation.

(4) National Bison Range Survey

Barnier (1971) surveyed portions of the National Bison Range during the summer of 1969 (although exactly where is not clear). A total of seven sites were located - three occupation sites, two pit sites, one cairn complex, and a site with possible "supernatural significance." The most important one was the MacDonald Lake site. This site, principally collected by a local amateur, contained 304 projectile points, 151 of which were identifiable to type. They ranged from Early Prehistoric period projectile points (Agate Basin, Agate Basin like) to Late Prehistoric. One hundred other artifacts were also found, but

these were mostly scrapers and knives. Barnier postulates use of the more open areas during the summer months, and use of lakeshore during the winter. He noted that while it might be possible to explain Late Prehistoric lifestyles by comparison to the ethnographic record, reconstruction of earlier life styles were based on archeological remains and these were as of yet (1971) insufficient to attempt this, Barnier concluded.

"For conclusive archeological research to be done in the Flathead basin, we need to know more about Glacial Lake Missoula, and--as is usually the case--we need a lot more interest in the area, a few good sites, and a lot more financial support." (Barnier, 1971:44)

(5) Flathead Indian Reservation Survey

The second study, Malouf (1974) conducted was to determine the effects of timber harvests on archeological and historical sites. Most of the fieldwork conducted for this study was done between 1949 and 1967. Portions of the Flathead and Little Bitterroot Rivers were surveyed. A total of 74 prehistoric sites were recorded on the reservation and eight in areas immediately off the reservation. Malouf groups the sites into 17 types. Most are described in some detail. Additionally, Malouf includes a brief prehistoric overview of the Flathead Valley and western Montana prehistory. One problem with this report is the lack of photographs, detailed site maps, and illustrations. This is the only summary report for the Flathead Reservation. This report also discusses the probable impact of timber harvest on sites. However, the impact of different harvesting methods and other sources of impacts needs to be better defined.

3. The Chronological Framework

Section IV shows a variety of artifacts that may indicate considerable time depth and outside relations. All the major periods are represented. A number of chronological schemes for the area north of this section have been proposed (see figure 9), most recently by Wayne Choquette (1984). His scheme has greater time depth than either Malouf's (1956) or Roll's (1982) and incorporates data other than projectile point typology.

Choquette's first period, called the Goatfell Complex, is characterized by black metamorphosed siltstone and large lanceolate and stemmed projectile points. These are thought to suggest affinities to the Clearwater and Snake Rivers further south in Idaho. Similar findings of projectile points are known from National Forest lands above 4200 feet (Lolo National Forest site files) (See photograph No. 7.) Additionally, large stemmed and lanceolate points illustrated by Ryan (1977) might also date from this period. These might be the equivalent of Windust points that are among the earliest cultural manifestations on the Columbia Plateau. Ryan (ibid.) also illustrates several projectile points that he considers to be Cascade points. If so, these would date from this early time period. Barnier also illustrated projectile points that date from this period. These are two possible Agate basin fragments, a Cascade point, and a large stemmed point that appears to date earlier than the McKean Complex to which Barnier attributes it. Fredlund (1970) states that there is Cascade and Angostura from the Stateline Trail, however, no material is illustrated making this difficult to support one way or the other.

Choquette's second period, called the Bristow Complex, is characterized by large tools and varied forms of projectile points. The majority of the latter are notched forms including Bitterroot, Salmon River side-notched, Oxbow, and Mummy Cave, as well as stemmed lanceolate and concave base projectile points normally attributed to the McKean Complex. These occur more infrequently than the forms mentioned above. However, the later points are generally more distinct than others, making recognition more reliable in general.

Bitterroot/Mummy Cave/Salmon River side-notched projectile points exist in this section, however, as Reeve's (1973) has noted, may have been "typed" as later styles of projectile points. Oxbow points have been identified along the Clark Fork River (Ryan, 1977) and are possibly illustrated by Hogan (1974) and Lacombe (n.d.) from the Stateline Trail. McKean Complex points (McKean, Duncan, and Hanna) have been found in most areas in this section, including the Clark Fork River Valley (Ryan, 1977) and the Stateline Trail where they are thought to be the predominant projectile point type (Fredlund, 1970). They have also been found in private collections in the Plains, Montana, area and in Forest Service inventories in this section.

Choquette's next period is called the Inisimmi (Rainbow) Complex. This complex is defined by a "riverine" orientation and large quantities of Kootenai argillite. Projectile points have expanding stems, a convex (often ground) pronounced shoulder excurvate type, deeply corner-notched expanding stem concave base, and contracting stemmed points. These projectile points are also thought to be part of Reeve's (1983) Burmis and Blue Slate Canyon subphases of the Pelican Lake Phase. Sites in this area yielding corner-notched projectile points are numerous. Until one of these is excavated, it is difficult to place corner-notched projectile points in their proper chronological context. For example, similar styles (types) of projectile points occur much later along the Columbia Plateau, thus suggesting the relationship needs to be examined in greater detail. Most authors, Choquette (1984) and Roll (1982), have suggested that the Inisimmi Complex is the beginning of the aboriginal settlement and subsistence pattern along the Kootenai River. Studies in the Clark Fork drainage have not progressed to a similar point. A similar situation may exist in the Clark Fork River Valley.

The next period is basically undefined and unnamed. It is also characterized by a change in lithic preferences. Roll (1982) suggested that the diagnostic projectile point type may be analagous to Besant points. Although it has been suggested that Besant points do not occur in areas west of the Continental Divide (cf. Reeves, 1978), Ryan (1977) illustrates points that may be this type. Additionally, Besant-like points appear in several private collections from the area.

Choquette's last phases are known as the Akiyinek and Akahonek. Both are explicitly tied to the Historic Kootenai. The Akiyinek Complex (1500-550 B.P.) is characterized by artifact assemblages. Projectile point types resemble Avonlea, with other stone tools being small and finely made. Another characteristic is the predominance of red and gold cherts, whose source is in stratified Section II. Choquette believes these traits are a result of seasonal movements and this might represent the beginning of cooperative bison hunting.
The second complex, Akahonek, post dates 550 B.P. and is characterized by a transition to northern raw material sources and a change from Avonlea to Tobacco

Plains side-notched projectile points. During this phase, the Kootenai began to occupy the area around Flathead Lake. Although this may have occurred during the Prehistoric Period, this area reaches its climax during the Early Historic Period (i.e., early 1800's). Some of the ideas discussed for the two complexes may be applicable to the northern portion of this section; however, most of the area was occupied by the Pend d'Oreille, a group about which there is very little information.

4. The Ethnographic Framework

The ethnographic framework for this section is difficult to assess due to the lack of published material on the Pend d'Oreille and the contradictions within what is published. Choquette and Holstine (1980:46) note that linguistically the dichotomy between Flathead and Pend d'Oreille dialects extends back as much as 1500 years. This would place the Pend d'Oreille as a discrete group longer than some authors have suggested. Whether there is a discrete boundary between the upper and lower Pend d'Oreille is another question that needs addressed. Malouf (1982) suggested there are distinct cultural differences between groups living east of Lake Pend d'Oreille and those living further west. This question needs to be addressed and more work needs to be done on this group. One additional question that is germane is the relationship between the native groups and early trappers, particularly since most of the early trading posts were located within or near this section.

5. Gaps in Knowledge

a. Surveys. In many instances surveys conducted in this section have not been reported, or the reports were issued in such limited numbers, they are essentially nonexistent. Other survey reports are issued long after the field work was done and do not use the more recent information, thus weakening the conclusions.

b. Excavations. The only reported excavation in the entire section is the Whitetail Site (24MO48) (Ryan and McLeod 1982). A small number of sites have been tested, however. More often than not, there is no explanation of any rationale behind the testing. One does, however, need to point out that as things currently stand there is a rather distinct lack of stratified sites reported from this section, so most researchers have focused their efforts elsewhere. It should be understood that we do believe that sites that could be excavated are present. However, they first must be located. A number of sites reported by Ryan along the Middle Clark Fork and by amateur collectors in other portions of this section all offer excellent potential for intact deposits.

c. Site Types. A variety of site types are found in this section. The predominant site types are open-air occupation sites. These usually consist of scatters of chipped stone material (flakes, cores, scrapers, etc.) and have sometimes been recorded as lithic scatters or campsites. Obviously, some standardization in site type definitions is needed. Throughout this section, a number of depressions (pits) have been identified. Malouf (1982) has suggested several possible functions for these features. These include pit house depressions, "battle pits," prospecting pits, and tree tip-overs. Malouf (ibid.) tested several of these features but was unable to assign a definite function since they contained no cultural material. He suggested that these were not pit houses because they lacked definite floors, walls, and features

normally associated with pit houses. This does not mean, however, that pit houses do not occur in this section since there is suggestion to the contrary (c.f. Ray 1939). Further work is needed on these features. One other type of pit feature in this section is thought to be associated with game procurement. Notably absent in this section are stone circles, making any assessment of habitation structures a questionable procedure at best, particularly since ethnographic and early historic accounts suggest that they should occur. Rare types of sites such as pictographs and burials also need to be better reported.

d. Chronology. This section lacks sites dated by any means other than projectile point typology. Any excavated site from this area should attempt to independently date the material recovered. In many cases, greater use of available information from private collections could aid in establishing a timedepth and cultural affiliation at sites in this section. This approach has been successfully used elsewhere in Montana (Davis and Helmlick 1982).

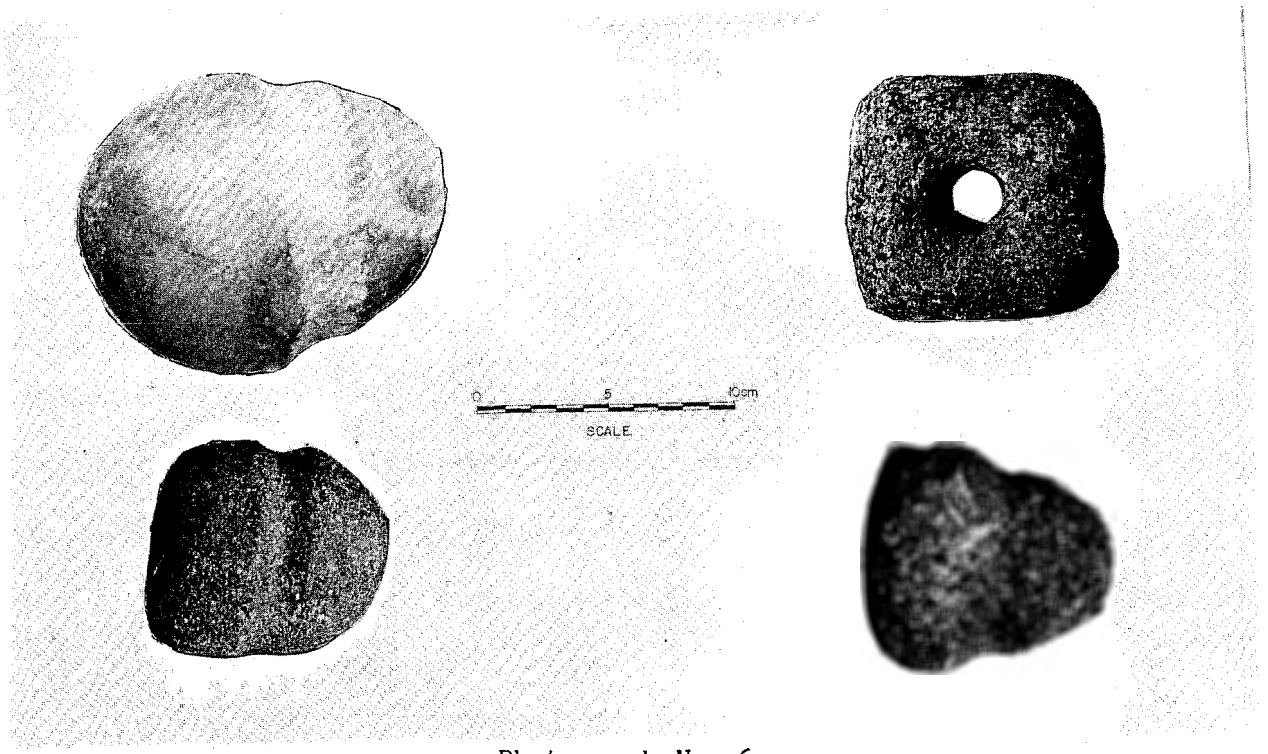
Throughout this region, there are major gaps in the chronological sequence. These are briefly summarized below:

(1) Early. Although there are few sites that have yielded materials (points) from this period, their context needs to be described. An examination of private collections would probably increase the number of early period artifacts, particularly in those areas that received little attention by archeologists. Also, the relationships between Middle and Early point types need to be examined. Finally, the southern limits of Choquette's (1984) Goatfell Complex need to be determined.

(2) Middle. A number of questions relating to the proper placement of artifacts from this period should be addressed. The relationship between elevation and specific point types needs to be examined, particularly with reference to past environments. The proper placement of large corner-notched points is a question that needs to be addressed, as well as the relationship between artifacts tentatively identified from this period and those with chronological control from other nearby areas such as the Kootenai River.

(3) Late-Early Historical. A number of questions about this period need to be answered. These include: when did true arrow points arrive, and is it possible to assign ethnic affiliations to them? When did the historically identified ethnographic groups begin to occupy this section, and what was the relationship between early trappers and the Native American groups? And, can this be verified by the archeological record? The role that influxes of plains and plateau cultural traits had on ongoing cultural systems also needs to be examined.

e. Other. Much of the material from this section in private collections needs to be described in detail, as well as the provenience of the sites themselves. This may prove useful for some collections such as Wendall Steven's (Photograph No. 6) that contains substantial numbers of infrequently occurring artifacts (in this case, ground stone). A number of sites in this section need to be relocated. This appears to be a particularly pressing problem in the Stateline area and in areas that are undergoing substantial impact such as along the Clark Fork.



Photograph No. 6

Ground Stone Artifacts from "Trading Post Site"
(No Site Number)
(Wendall Stevens collection)

6. Summary

The archeological record in section IV shows extreme diversity during the prehistoric periods. Artifacts from all the cultural sequences have been found in this area. Also, significant lithic procurement sites (24MO40 and 24MO75) have been found in the Ninemile valley.

Again, almost all site types discussed in chapter VI have been found in this area. The only exception is roasting pits. Perhaps these site types are absent because of the physiography of the majority of past survey areas; or, possibly, due to an ignorance of these site types to early researchers. The archeological record in this area shows an extensive influence from the Columbia plateau in artifacts types such as pestles and projectile points. Pithouse dwellings, however, have not yet been found in this section.

Ethnographically section IV was the traditional home of the Pend d'Oreille, although the Flathead and Kutenai, no doubt, made use of the area in the early historic period. The Blackfeet were also known to send raiding parties into the area at this time.

The overall settlement and subsistence patterns of the prehistoric inhabitants may have been similar to those further north along the Kootenai River; that is, relatively small bands that aggregated along the river valleys during the late fall and early spring. The remainder of the year these bands would disperse

into smaller groups and practice a seasonal round that exploited a variety of plant and animal resources as they became available in different ecosystems. This pattern appears to have remained essentially unchanged in the Kootenai region from the middle prehistoric period until acquisiton of the horse (Roll, 1982).

On the other hand, the adaptive strategies and settlement patterns may have been different in section IV. Only the excavation of one or more stratified sites along the Clark Fork or Flathead Rivers will provide the data to answer this question.

7. Future Research Questions for Section IV

a. When did true arrow points arrive in this area? Is it really as late as current evidence states? Or, did they arrive in western Montana approximately the same time period as in other parts of the state.

b. Do pit house village sites exist along the Clark Fork, Flathead, or Kootenai Rivers? And, if so why or why not?

c. What factors appear to attract a relatively large number of prehistoric sites in some high altitude areas and not others? For instance, a relatively high site density exists along the Montana Idaho State line east of St. Regis Montana to nearly Lolo Pass. However, the site density appears to decrease dramatically as one goes west of St. Regis along this same ridge system.

d. What types of subsistence strategies were employed and did they change over time? Currently, site distribution appears to focus along the major river valleys and at some high elevation areas. Sites appear to be distributed differently to some degree in section IV than elsewhere in the study area. Why?

Appendix No. 4 displays the prehistoric sites recorded to date in section IV.

F. Summary and Conclusions

1. Summary

The Lolo and Bitterroot National Forests are situated within the Northern Rocky Mountain region in western Montana and east-central Idaho. The area is characterized by large, intermountain valleys surrounded by rugged mountain ranges that average 7000-8000 feet above sea level. Glacial Lake Missoula inundated most of these valleys to an elevation of approximately 4200 feet until 13000 years ago. The western portion of the area is characterized as having a moist, maritime climate while the south and eastern portions are of the drier, continental type. These factors--climate and elevation--create a number of diverse environmental zones that contain a variety of plant and animal resources that allowed human occupation in the area during the prehistoric periods.

The study area lies directly between three, and perhaps four, distinct cultural areas. These are the northwestern plains to the east, the Great Basin to the south, the Columbia plateau to the west, and perhaps the Boreal Forest to the north. It appears this area received cultural influences from all of these areas to greater or lesser degrees throughout the prehistoric periods.

To date, we know that the area has been occupied by humans for at least 8000 years and perhaps longer. Those early occupants were primarily hunters and gatherers who made their living exploiting a variety of plant and animal resources throughout the region at certain times of the year. The anadromous fish (salmon and steelhead) native to the Salmon, Selway, and Clearwater Rivers in Idaho were an important resource to prehistoric groups. These fish, however, did not exist in the rivers of western Montana.

Ethnographically the study area was the home of the Northern Shoshone, the NezPerce, the Flathead, Pend d'Oreille, and Kootenai Indians. Other groups, including the Blackfeet, were known to visit the area during the early historic period. Many of these groups are thought to be fairly recent arrivals into the area; that is, within the last 300-500 years. The ethnographic affiliations of the groups that occupied the area during the early and middle prehistoric periods are currently unknown and probably always will be.

Acquisition of the horse by native groups in the mid-1700's and the contact with Euro-Americans that followed greatly changed the traditional way of life of Indian groups. The Lewis and Clark Expedition was the first substantiated contact of Euro-Americans with native groups in this area in 1805. In the years that followed, Euro-American contact was primarily with traders from the British-owned northwest and later Hudson's Bay Company. Later, Jesuit priests established missions at St. Mary's, Cataldo, and St. Ignatius. Protestant missions were established in Idaho. It was not until the Stevens Treaty of 1855 that the United States Government entered into treaties with the indigenous Native American groups in this area.

2. Conclusions

The prehistory of western Montana and east-central Idaho is a unique and a little known resource primarily because, compared to elsewhere, so little work has been undertaken. This overview has attempted to pull together the previous archeological work completed and show what is currently known about the area's

prehistory. Furthermore, the authors have attempted to point out those gaps that currently exist within the data base.

In the future as more work is undertaken under the auspices of cultural resource management or academic research, these gaps will become smaller.

The area encompassed by the Lolo and Bitterroot National Forests lies within the northern Rocky Mountain study area recently discussed by the Society of American Archeologists. Attention is focusing on this area as a distinct archeological and cultural area unto its own.

IX. SURVEY STRATEGIES AND RESEARCH DESIGNS FOR THE SMALL AND MEDIUM-SIZE ARCHEOLOGICAL SURVEY IN WESTERN MONTANA AND EAST-CENTRAL IDAHO

A. Introduction

This chapter attempts to show how the existing data base (recorded prehistoric sites) for the study area was collected; both from academic research, as well as more recent cultural resource management projects. The survey strategies employed in the past, as well as currently, to locate cultural resources on National Forest System lands will also be discussed. Finally, ideas for future inventory strategies and site identification will be addressed.

B. Previous and Current Survey Methods

Compared to elsewhere in the United States, very few archeological surveys had been conducted within or near the study area prior to implementation of Cultural Resource Management (CRM) programs in the mid-1970's. These early CRM surveys were conducted almost exclusively by students or faculty members from universities in Montana or Idaho. Chapter IV of this overview discusses the results of these early surveys. Generally, however, these early inventories focused on the recording and the collecting of artifacts from the major prehistoric occupation sites in the area. Usually, little information exists regarding the survey strategy employed or what criteria constituted a "site."

The enactment and implementation of the various CRM legislative acts in the early 1970's triggered several changes in the traditional archeological survey methods in western Montana. Archeologists who worked on Cultural Resource Management projects, for example, were now required to survey lands as defined by their project and its related areas of impact. Another important factor born by this legislation was the requirement for determining site "significance." In preceding years, only the larger sites with many artifacts or features were considered important and worthy of study. The small lithic scatter, scarred tree, or stone cairn was seldom considered an important archeological manifestation. Likewise, prior to the mid-1970's historic sites were seldom documented or researched. The exception to this would be the research and excavations conducted by Dr. Carling Malouf at such major sites as Fort Owen, Salish House, and Cantonment Jorden.

The implementation of Cultural Resource Management legislation quickly placed a comparatively large number of archeologists into the field. But now they were directed to conduct surveys in areas determined by project activities and to evaluate sites (prehistoric and historic) within the framework of National Register eligibility criteria. The transition of archeology coming from the academic classroom, or a field project with a tightly focused research design into a land use planning office, or on to the site of a proposed timber sale was rapid and many growing pains developed. Hopefully, these pains have subsided into only minor aches as the archeologist and land manager/project planner together became more experienced in the Cultural Resource Management process.

In 1975, when the Lolo National Forest implemented a Cultural Resource Management program, only three prehistoric sites were listed on Lolo National Forest lands in the University of Montana statewide archeological survey. Other sites were undoubtedly known to Forest Service employees or local amateur archeologists but they remained unrecorded and essentially unknown to the

professional archeological community. The first few years of the CRM program on the Lolo National Forest project inventories were conducted by three social science technicians working under the overall supervision of the Regional archeologist. One of these people was a recent graduate of the University of Montana, Department of Anthropology, and had participated in field surveys in eastern Montana. Another individual was an anthropology graduate from Stanford University with limited field experience. The third person was an anthropology and history graduate from the University of New Mexico with field experience gained from the southwest and the Arctic. In short, the first surveys conducted on the Forest were done by people experienced in archeological field methods but from other cultural and environmental areas. They had no prior field experience in western Montana and only a rudimentary knowledge of the existing cultural chronologies, ethnography, and expected site types. Initially, intensive transect surveys were used to inventory proposed timber sales. That is, the crew would space themselves 15 to 20 meters apart and attempt to survey the entire project area. All aspects, slopes, and habitat types received the same intensity of coverage. This method was employed only a short while because of its overall ineffectiveness in locating sites and completing survey projects. The survey methods that replaced the 100 percent transect survey could best be described as controlled partial surveys (Moratto 1978). Those areas and landform settings where known site types could possibly exist were intensively inventoried. The deliniation of which areas within the overall project area would receive an intensive survey was based upon the archeologist's knowledge of the local ethnography, known site types, and their relationship to topographic and environmental factors. The areas that were intensively surveyed included major ridges, river terraces, prominent mountain peaks, lake shores, natural meadows, and areas adjacent to springs. Any less-than-common land forms such as large rock faces, talus slopes, and possible rock shelters were also thoroughly inventoried. Once the efforts were focused to specific topographic features, the crew began to locate prehistoric sites. Undoubtedly, these sites would have eventually been located if the 100 percent transect survey method had continued to be used. However, it is doubtful that the prehistoric site data base would be substantially increased had the transect method been retained. In short, we have found more prehistoric sites using the complete judgmental survey methodology rather than the 100 percent transect approach simply because we have looked at more lands with topographic and environmental features where known site types had been located in the past.

Consideration for historic sites modified the survey methodology from focusing strictly on environmental and topographic features. Historic documents such as maps, archival records, early Forest Service maps and records, as well as local informants provided information about the locations of early minings, trapping, and logging facilities. These site types, while somewhat predictable, can often times occur in very unlikely terrain. Sites of these types have been found on steep forested hills with a north or western exposure where a flat area large enough for a building site had to be excavated into the hillside.

Consequently, for these reasons all land types within a project area usually received at least some intensity of cultural resource inventory. Often times, this occurred simply because of pedestrian travel requirements necessary for accessing those areas expected to contain sites.

Refinement of this survey strategy has been an ongoing process, and the increased finds of prehistoric sites and isolated finds in the rugged forested

environment of the Lolo National Forest has bolstered the confidence level of the Cultural Resource staff over the years. On the other hand, use of this survey methodology is indeed biased and may have skewed the location factors of sites within the data base. This issue will be discussed in greater detail later within this chapter.

In 1981, extensive subsurface testing of areas that appeared to warrant such efforts became an integral part of the inventory strategy. The results have been fruitful. For instance, a prehistoric open-air camp site was found by this method during the cultural resource inventory for the Church House Timber Sale (see report No. 81,LL,4,43). No evidence of a prehistoric site was present on the surface, but random shovel tests soon revealed chipped stone to be present at a depth over 10 centimeters. This site probably would not have been found had subsurface testing methods not been employed.

An increased knowledge and awareness of the ethnographic record of people who lived within and adjacent to the area during the Proto Historic and Early Historic periods has also helped the effectiveness of cultural resource surveys. Simply knowing the tribal distributions and subsistence strategies of historic native groups in detail helps the archeologist infer a similar subsistence model for that and similar areas back in time. For example, if the archeologist knows that an area was used repeatedly as a campsite by a specific group at a certain time of the year and if he/she has a basic understanding of the groups' subsistence strategies and the locations of various utilized resources, then he/she can predict, based upon environmental factors, where these resources can be found and the general locations of task specific sites such as scarred trees, vision quests, etc.

Unfortunately, this hypothesis begins to weaken the farther back in time one goes. The ethnographic record may be relevant in some areas such as the Kootenai region of western Montana for interpreting settlement and subsistence patterns and their associated sites. But again, it may not. The ethnographic groups that occupied western Montana and east-central Idaho at the time of Euro-American contact, and even today, may not have lived here 3000 years ago. Consequently, the Early and Middle period sites on the Forests <u>may</u> have been occupied by people with entirely different ethnic affiliations. This possibility, compounded by the fact that cultures and their related subsistence strategies, religious beliefs, etc., do change over time, weakens a prehistoric site survey strategy based solely on ethnographic analogy. Nevertheless, a thorough knowledge of the ethnographic record is essential for locating and interpreting sites from at least the Proto Historic and Late Prehistoric periods. It is also a foundation, or at least a building block, from which to begin locating and interpreting sites from the earlier periods.

An increased knowledge and understanding of the "cultural geology" of the area has also helped the effectiveness of refining our survey strategies. Information on the location of possible stone deposits such as basalt, crypto crystallines (chert, jasper, etc.), and siltstones is incorporated into each survey design because these stone deposits were essential for the manufacturing of stone tools. And, because natural deposits of these types of stone are comparatively rare in this area compared to other areas in Montana and Idaho, these deposits (quarry sites and/or lithic procurement areas) played a vital role in the lifeways of people throughout the prehistoric periods. Also, the former limits of Glacial Lake Missoula have been determined on the Lolo National

Forest and intensive survey efforts are expended along the former beaches and peninsulas with the anticipation of possibly locating a site contemporary with the glacial lake.

The effective interchange of information between archeologists working in adjacent areas is also essential for gaining an awareness of site types that may have been previously unknown. An example of this occurred in 1984 at the Society of American Archeologists meeting in Portland, Oregon. The Forest archeologist from the Gifford Pinchot National Forest in western Washington presented a paper on peeled cedar trees as a site type. Apparently, aboriginal Native Americans used cedar bark for constructing baskets and other items. To my knowledge, this had not been a recognized site type by the Forests in Region One. However, once this information became known to local archeologists, peeled cedar trees were located a few miles west of Lolo Pass on the Powell Ranger District, Clearwater National Forest, and near Priest Lake on the Idaho Panhandle National Forests (Sims and Roenke 1984: personal communication).

Few cedar trees exist on either the Lolo or Bitterroot National Forests in Montana. They only occur in the more moist areas of the western portion of the Forests. Future cultural resources inventories on the Lolo National Forest will certainly consider the possible presence of peeled cedar trees during survey planning.

A combination of this information has been assembled to construct logical but broad research designs that are employed during surveys for each project if they lie in the appropriate area.

Some of these research questions include but are not limited to the following topics. First, the affects Glacial Lake Missoula may have had on prehistoric settlement and subsistence strategies. Second, what was the time period of occupation and function of high altitude sites (sites located over 6500 feet above sea level). Were these areas used continuously over time or was prehistoric high altitude use triggered, as some people believe, by a distinct warming trend on the northern plains approximately 5500 BP known as the Altithermal period (Antevs: 1955). A third research problem focuses on geologic and topographic features that have the potential to contain sites contemporary with the Paleo Indian period approximately 10000 BP. These areas would include the terraces adjacent to the Clearwater River drainage, the major ridge systems on the Forests such as the Continental Divide, CC, and Ninemile Divide and the Rock Creek-Bitterroot Divide and other land form types where prehistoric campsites could occur above the 4200 feet elevation level which was the latest beachline of Glacial Lake Missoula.

The inventory strategies employed on the Lolo and Bitterroot National Forests have been and continue to be dynamic in execution. This is necessary to accommodate and integrate a continual flow of new information that becomes available. The example of peeled cedar tree sites discussed earlier is one case in point. Another example is the question of the presence of pit house village sites in Montana. Do these site types presently not occur in the archeological record for western Montana because they do not exist? Or, on the other hand, is it simply that past researchers have not considered them as a site type indigenous to western Montana?

This dynamic inventory approach unfortunately hinders the concept of "cleared acres" in the traditional management context. That is to say that once a piece of ground has been inventoried for cultural resources, it never need be looked at again. Sometimes new information becomes available such as previously unknown site types (i.e., peeled cedar trees) that may warrant a followup inventory on a previously surveyed piece of ground. Additionally, some of the first cultural resource inventories conducted in the mid-1970's almost certainly would not meet the inventory standards expected by the SHPO today. For example, some of these early survey reports indicate that one person inventoried 3500 acres in one day and found no sites. Usually no other records exist such as field notes or detailed maps other than the final one-page project report. No records differentiate between areas actually surveyed and the areas that were "written off" due to steep slopes or dense vegetation without an on-the-ground field check. Likewise, little or no information is available regarding the previous survey strategies or what types of sites were expected to occur as well as those that did or did not occur and why.

This lack of survey records and weak reporting methods is in no way meant to be negative criticism of the first Forest Service archeologists. Rather, the first few years of the Lolo and Bitterroot Forests Cultural Resource Programs underwent many growing pains that culminated in creating effective survey strategies as well as a mechanism to adequately document completed inventories for future use.

Even though an intensive inventory has been conducted in an area, it still does not preclude the possibility of locating a site in the future. An example of this situation occurred near Siegel Pass on the Ninemile Ranger District of the Lolo National Forest. Siegel Pass is a low saddle on a major ridge that connects the Ninemile and Reservation Divides. The pass lies between Ninemile Valley to the east and the Clark Fork River to the west. Several prehistoric campsites and lithic scatters had been located in the surrounding area at high elevations on the ridges and along the adjacent valley floors. The patterning for sites previously located in high altitude areas showed that most sites were located in major saddles. For this reason, Siegel Pass was expected by many archeologists (Malouf, Ryan, Fredlund, and McLeod) to contain at least some evidence of prehistoric activity even though several roads had previously been constructed through the saddle and altered the landscape. The fact that the pass lay directly between two separate drainages along a suspected prehistoric travel route increased the expectation for a site. Several people had inventoried this area in the past and limited subsurface testing had been conducted, all with negative results. Nevertheless, Siegel Pass was checked again during the 1981 field season while enroute to another project inventory area. This time cultural material (a basalt blade) was found in a root ball of a recently blown-over tree. Further search yielded approximately thirteen pieces of cultural material including one basalt core. Certainly enough material had been found to now indicate Siegel Pass was used by aboriginal people during the prehistoric period.

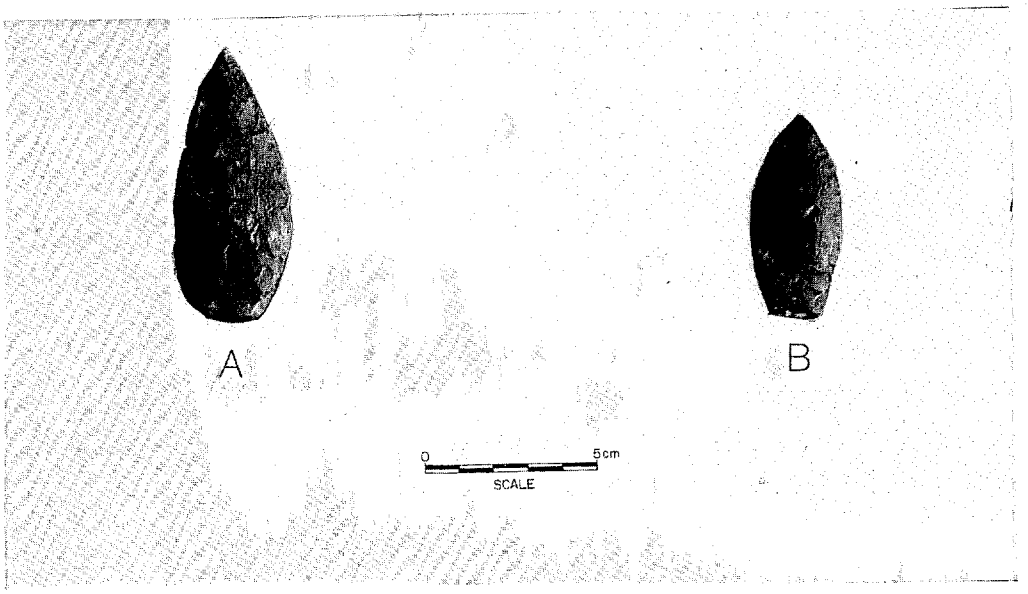
This case is presented to illustrate how and why it can be necessary to sometimes check and reevaluate certain previously inventoried areas. This approach in conjunction with a scheduled monitoring program of previously identified "key" areas assists the planning and implementation of an effective yet dynamic survey strategy.

C. Problems with the Controlled Partial Survey

One major problem with this inventory methodology is that archeologists in western Montana may be, and probably are, creating a biased data base. That is, they are locating only those prehistoric sites where they expect sites to be located. They in turn, may not be locating those sites that occur (based on our perceptions of site distribution today) where they are not expected. And, it may be that these sites (if they do exist) are more significant precisely because of their unexpected patterning and distribution and their potential to inform the archeologist of the subtleties of human behavior over an extended time span.

Unfortunately, the environmental conditions for the majority of survey areas (i.e., timber sales) favor neither the preservation or identification of prehistoric resources. The material culture of the ethnographic people in this area prior to the introduction of European trade goods was made almost exclusively from organic materials. Tools were made from chipped or ground stone, bone, and wood. Animal hides and plant fibers were also used for clothing, tools, and possibly other uses. The coniferous forests of western Montana and east-central Idaho are extremely acidic and quickly deteriorate almost all artifacts other than those made from stone. Dense vegetation accompanied by a thick mantle of Forest litter (i.e., duff and downfall) usually hinders the surveyor from viewing mineral soil where surface cultural items such as lithics are expected to occur. Mat leaf clearing and subsurface testing of expected or potential site areas mitigates only part of this problem. Such techniques, while proven to be effective for locating sites in some areas, are difficult and time consuming to employ equally within a project area. Consequently, these methods are used only in suspected activity areas where stone tools or lithic material appear to be present. These areas are usually (but not always) limited to certain land forms necessary for specific site types. For instance, major prehistoric campsites which normally contain these artifact types have most often been found in areas near water with slopes less than 30 percent. Lithic scatters and/or hunting or butchering sites also usually contain these artifacts and are located again in relatively gentle terrain such as ridgetops, saddles, mountain peaks, or terraces, etc. Distance to water for these site types has appeared to have little influence on their site selection nor does the overall size of the gentle terrain area. These sites have been located in many small saddles and mountain tops but a key factor appears to be relatively flat topography (less than 30 percent slope). It is difficult to imagine what tasks could be performed in areas of steeper slopes that would yield identifiable amounts of lithic material or stone artifacts. The activities conducted where numerous stone tools would be used or modified thus generating debitage, have consistently been found in relatively flat terrain. That is not to say, however, steeper slopes (greater than 30 percent) were not used by people during the Prehistoric and Early Historic periods. On the contrary, the ethnographic record clearly shows that almost all environmental zones were used for certain task-specific purposes. Just as certain environmental factors like aspect, moisture, and elevation determine the presence of specific resources such as root and berry plants, wildlife browse, etc., certain topographic and environmental settings are necessary for humans to conduct activities that would leave lasting evidence of their presence over time.

Huckleberries were gathered on steep mountainsides in areas previously burned by either man-caused or natural fires. Likewise, moss, pine nuts, camas, and bitterroot were gathered and sometimes processed in areas away from residential camps. Malouf in his 1952 article, "Economy and Land Use by Indians of Western Montana," discusses in detail the subsistence strategies and resource procurement areas used by the Flathead, Pen d'Orielle and Kootenai Indians during the Historic period. This information was gathered from people who had participated in these activities during historic times. It is likely these same areas and resources were utilized by native groups well back into the Late Prehistoric period. In fact, it may be these resource procurement areas were more intensively scheduled and exploited prior to the introduction of the horse (ca. 1730) because of the decreased mobility that pedestrian travel would dictate. Nevertheless, the possibility of locating artifactual remains from activities performed in these areas is extremely unlikely. However, simply by knowing the general location of these resource procurement areas provides the archeologist with another data set with which to formulate a more rigorous survey strategy to locate either primary or secondary campsites associated with these areas.



Photograph No. 7

Early Period Projectile Points Found
at Plains Ranger District

Unfortunately, these assumptions of site (activity area) selection do not take into account the ubiquitous isolated find or Minimal Activity Loci (MAL). This assumption of site location, for instance, would have probably missed two significant isolated artifact finds on the Forests. For example, two isolated artifacts were found on the Plains Ranger District in the early 1970's by a former Forest Service employee (Garland Johnson, Plains Ranger District, Civil Engineering Technician). The first projectile point, A, is possibly from the Paleo-Indian period (7000-10000 B.P.) and was found in a road cut during construction. The point was found below ground surface on a slope greater than

30 percent on a northern exposure above the 4200 feet elevation level. The second, B, was a stone knife or a possible projectile point again possibly from the Paleo-Indian period (see photograph No. 7) in a similar "unlikely" area. Both finds are significant for several reasons. One, they both indicate that prehistoric activities occurred in areas that today's archeologists would consider "low probability areas" for locating prehistoric artifactual remains. Two, the projectile point found near Mud Creek strongly suggests that a Paleo-Indian presence existed near the Plains-Thompson Falls area in western Montana. Three, the material from which both artifacts was made is a black metamorphosed siltstone that strongly resembles the Pine Creek shale which occurs naturally in the Ninemile Valley and near the Little Bitterroot River (Ryan and McLeod 1982 and Choquette and Holstein 1982). Obviously, a great deal of information was obtained with these two finds, but the fact they were found at all was extremely fortuitous. Both artifacts would have probably been missed using the current survey methods employed by the Lolo and Bitterroot National Forests. Furthermore, these isolated artifacts, although extremely important, would have been missed utilizing almost any survey strategy short of intensive subsurface testing of nearly every acre on the National Forests! Significant information contained in sites or isolated finds like these no doubt has been lost in the past and no doubt will continue to be lost in the future. I am certainly not advocating the idea of acceptable loss of this data but the "real world" situations of limited time and personnel unfortunately preclude locating these types of sites except under the most fortuitous circumstances.

D. Survey Strategies Employed on the Lolo and Bitterroot National Forest Since 1982

The survey strategies employed on the Lolo and Bitterroot National Forests since 1982 have undergone many changes and refinements but for the majority of timber sale and large land exchanges can still be described as a controlled partial survey. The exceptions to this are inventories conducted for small projects (usually less than 80 acres) where a 100 percent pedestrian survey is undertaken. These would include most mining projects, gravel pit locations, and small land exchange parcels. Certainly, some portions of larger projects receive a 100 percent coverage. These areas would include, but certainly not be limited to, areas suspected of having a strong possibility to contain at least one or more of the prehistoric site types discussed in chapter VI. Also, those areas that have been identified in the historic record or by local informants as to the likelihood of containing historic sites also receive 100 percent pedestrian coverage. Otherwise, some form of controlled partial or sampling survey strategy is employed. The details of each survey methodology are addressed in the survey report and the field notes for the specific project.

The majority of cultural resource surveys on the Lolo and Bitterroot National Forests are triggered by a proposed Forest Service undertaking such as: timber sales, land exchanges, mining leases, road and powerline construction projects, etc. The following outline shows the steps each project undergoes for the cultural resource compliance process:

I. Project Notification

A. Letter sent to each Ranger District requesting cultural resource support needs for the coming field season.

B. Project file made for each project submitted.

C. Projects are scheduled by priority on a District, Forest, and Zone basis. Priorities are based upon the following criteria:

1. Accessibility, i.e., snow conditions, road closures, etc.
2. Forest needs.
3. Site probability and potential for project conflict.

II. Prefield Inventory

A. Systematic cross referencing of:

1. Past cultural resource project surveys within or near the current project area.
2. Lolo/Bitterroot cultural resource site records.
3. University of Montana Archeological SITS files.

B. Consultation of the historic records within or near project area to include but not limited to:

1. National Register of Historic Places, State Preservation Plans.
2. Consultation with Native American groups.
3. Early Forest Service records and maps.
4. GLO Plats, BLM land status records.
5. Oral historical record (if available).

C. Stratification of project area based upon topographic and environmental variables.

1. Identify areas that could contain specific types of sites:

   a. River terraces and drainage confluence for prehistoric campsites.
   b. Saddles along major ridge systems for lithic scatters.
   c. Large rock outcrops for rock art.
   d. Mountaintops or high elevation spur ridges for vision quests or other possible religious type sites.

2. Identify areas that for known geological factors could contain prehistoric (or historic) sites.

   a. Possible beaches and peninsulas associated with Glacial Lake Missoula.
   b. Areas that could possibly contain deposits of workable stone for quarry and/or lithic procurement sites.
   c. Areas that underwent a significant period of historic activity in the past, i.e., Ninemile Valley, Cedar Creek, Hughes Creek, etc.

III. Field Inventory Methods

A. Areas of suspected site locations (determined from literature review and environmental stratification) receive complete pedestrian coverage.

B. Major topographic features (ridges, peaks and primary and secondary drainages in project area) receive complete pedestrian coverage.

C. Subsurface testing or mat leaf clearing is conducted when determined appropriate, i.e., one cannot view mineral soil due to duff, forest downfall, or thick sod at suspected site locations or major topographic features.

1. Location of test pits recorded in field notes that remain in project file.

D. Some topographic and environmental areas that appear less likely to contain sites are also inventoried with a pedestrian survey, i.e., tertiary drainages, isolated benches, steep ridges greater than 65 percent.

E. Pedestrian random transects are also conducted in most project areas because:

1. It is necessary to access certain suspected site areas or topographic/ environmental areas.
2. To provide more complete inventory coverage for the project area.

F. Cultural resource awareness training for Forest Service employees assists inventory quality before, during, and after completion of project survey.

IV. Site Recordation and Report Preparation

A. All sites recorded on standard Region One site form and assigned a Smithsonian number.

B. Inventory report prepared using standard format.

C. Report and site forms submitted to:

1. Ranger District.
2. Montana State Historic Preservation Office.
3. University of Montana Archeological SITS records.
4. SHPO comments submitted to Ranger District.

D. All recorded sites and effects of project are managed in consultation with SHPO and Advisory Council as specified within 36 CFR 800 and FSM 2360.1.

V. Followup Procedures for Completed Inventories

A. Inventoried acres recorded on a map by District, project name, year, and report number for easy future access.

B. Monitoring of suspected site areas where negative findings resulted from the initial inventory, i.e., the Siegel Pass site example.

C. Resurvey certain areas in the future if new information comes to light to indicate the possible presence of previously unidentified sites.

E. Future Refinement of Survey Strategies

The survey strategy currently used by archeologists on the Lolo and Bitterroot National Forests has undergone many significant changes since 1975. The general continuity of personnel on both Forests has allowed the archeologists to develop a knowledge of the local history, ethnography, and natural history factors that influence site distribution. Also, this continuity has allowed ample time for training archeologists conducting fieldwork in western Montana and east-central Idaho to recognize some of the extremely subtle prehistoric sites that exist in this rugged mountainous terrain. This ability is not readily gained in the college classroom or even by conducting archeological fieldwork in other cultural areas. Indeed, for the most part, it is gained by the experience of site recognition in the local area, experience in artifact material types, site distribution, and patterning as well as a familiarity with the local history, ethnography, and cultural geology of the area. Undoubtedly, some sites have been missed in past years and may well be again in the future for many reasons. First, the rugged terrain and vegetation of the area makes identification of sites (even with subsurface testing) extremely difficult. Second, simple recognition of certain site types may not always be possible. Certain Native American religious type sites, for instance, may not be recognizable to even a well-trained and experienced archeologist. Third, the human factor may also preclude identification of some cultural resources. Human error or surveys conducted by inexperienced people have been and probably will exist in the future. Also, the unavoidable situations such as time, logistics, and safety factors may preclude the identification of some sites.

Nevertheless, the Forests have made significant headway in the past 10 years in the identification and recognition of cultural sites. To date, nearly 600 sites have been recorded on the Lolo and Bitterroot National Forests and the inventory is far from complete. The controlled partial type survey method will continue to be used for the larger (100+ acres) inventory projects yet it will continue to remain dynamic in scope. That is, it will be flexible enough to accommodate new information as it becomes available to ensure the best cultural resource inventory job possible is performed.

The survey strategies employed on the Lolo and Bitterroot National Forests will continue to improve in the future for the following reasons: First, the interchange of information of site types, site distribution, and survey methods that has and will continue to become available from other archeologists working in the Northern Rocky Mountains. The Northern Rocky Mountain cultural area conference has recently addressed this issue. Two, increased communication among archeologists will hopefully lead to an increased interpretation of the existing data base. Finally, as more projects are inventoried thus generating more acres surveyed (and hopefully sites located), this information will shed more light on patterning and distribution of sites over time.

X. Current Management Situation of Prehistoric Resources on the Lolo and Bitterroot National Forests.

A. The Role of the Forest Archeologist

The responsibilities of the Forest Archeologist are diverse and complex. Misconceptions exist regarding the duties and functions the archeologist performs within both the agency and the general public. The position of Forest archeologist is not, as some people believe, an open license to conduct archeological research on Forest lands. Neither is it the archeologist's role to attempt to "save" every cultural resource on the Forest. Rather, the Forest archeologist is a specialist whose job is to provide Line Officers, District Rangers, and Forest Supervisors with sound professional recommendations for the management of the cultural resources located on the lands they administer. The quality and level of this management reflects the program that is implemented by the Forest Archeologist.

Line Officers have the task of managing a variety of natural resources within a complex balance. Prehistoric sites, as well as other cultural resources, are simply another resource that must be managed within this balance. However, the legislation that affects cultural resources is quite specific. Cultural resources are more heavily regulated than most other resources, and the compliance process can become very complex. Therefore, the recommendations provided by the Forest Archeologist must ensure compliance with laws and procedures mandated by those laws.

To meet these responsibilities the Forest Archeologist must have a thorough understanding of the legal aspects of cultural resource management as well as an "academic" knowledge of local and regional prehistory. They must also meet the professional qualifications for the position as specified within the Secretary of Interiors standards and guidelines (36 CFR 61.5b) which is at least a master's degree in the field of anthropology or a closely related field plus professional field experience.

The Forest Archeologist is charged with identifying all cultural resources on Forest lands. And, evaluating these resources in terms of their National Register significance. Additionally, the archeologist develops alternatives for management for those sites found by SHPO and the Keeper of the Register to be eligible for National Register listing.

The criteria by which all cultural resources are evaluated is as follows:

> The quality of significance in American history, architecture, archeology, and culture is present in district, sites, buildings, structures, and objects 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 our 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, or 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 components may lack individual distinction; or

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

The criteria for National Register eligibility for historic sites is fairly broad and covers such qualities as architecture, association and representation of a certain time period, style or event. Most prehistoric sites, on the other hand, are usually eligible under criteria D. That is, they must "...be able to yield information important to prehistory at the national, state, or local level."

Since cultural resources represent a nonrenewable resource one must be extremely judicious in their evaluation and recommendation for future management. This overview has tried to point out that prehistoric resources are essentially isolated time capsules that contain information about the human experience in the area over a long period of time. These sites are the only mechanism for acquiring information about the prehistoric cultures that formerly occupied this area. A poor recommendation for protecting a site or incompetent evaluations can irreparably damage the resource thus losing its information potential. Once this is gone the site essentially becomes meaningless.

Sites that do not have the ability to yield significant information or which will yield only redundant information are probably not eligible for National Register listing and generally do not warrant protection or further management consideration. The Forest Archeologist is charged with making the initial site evaluations. Information concerning the site and the Forest Service evaluation and recommendations are then forwarded to the State Historic Preservation Officer for review. This system of checks and balances exists on the premise that two heads are better than one. The system helps ensure that sites will be properly and fairly evaluated and that one person's bias or lack of knowledge will not lead to an "ineligible" determination for a potentially important site. Conversely the system will ensure that time and resources are not wasted on managing cultural resources of little or no value.

Ultimately, the Forest makes the final decision for management of the cultural resources. However, the review system as outlined in Federal Law (36 CFR 800) ensures that the best possible management decisions are made and that the steps in making these decisions are documented. This documentation shows that the compliance process has been met.

B. Cultural Resource Compliance on the Lolo and Bitterroot National Forests

The Lolo and Bitterroot National Forests have attempted to comply with both the letter and spirit of the laws affecting cultural resources since inception of their programs nearly 10 years ago. On the whole, we believe both Forests have been successful in this endeavor and will continue to comply with these laws in the future.

Current Forest Service (and all Federal Agencies) responsibilities are to inventory all affected lands for cultural resources prior to any ground disturbing activity. If cultural resources are located, they are to be evaluated against the eligibility criteria for nomination to the National Register of Historic Places. This is done in consultation with the State Historic Preservation Officer as well as the "Keeper of the National Register." If the resource is determined eligible for listing on the National Register, the effect that the proposed project will have on the site must be determined. This determination is to be done in consultation with the State Historic Preservation Officer and the Advisory Council on Historic Preservation (another Federal organization). If the site will be adversely affected by the proposed project, usually some form of mitigation must be completed before project implementation. The mitigation proposal, as well as standards and techniques, must be agreed upon by the Forest Service, the State Historic Preservation Officer, and the Advisory Council on Historic Preservation.

Acceptable measures to mitigate impacts to prehistoric sites might include but are not limited to the following: 1) photographing and dating (increment boring) a select sample of trees at a scarred tree site; 2) moving a proposed road location so it avoids a prehistoric rock art panel; and 3) excavating a prehistoric campsite that will be impacted by logging activity or road construction thus recovering the artifacts and other data essential to interpreting the site's importance in the area's prehistory. If excavation is the preferred method selected to mitigate adverse impact, a formal report of publishable quality is usually required at completion of the project. This report should not only summarize the data recovered from the site but interpret the information extracted from the site within a cultural chronological and processural context if possible. Throughout 10 years of cultural resource management, only two prehistoric sites (24MO48 and 24GN203) have been mitigated by excavation on the Lolo National Forest. The Big Creek Lake Site (24RA34) is the only prehistoric site mitigated through excavation on the Bitterroot National Forest.

It may appear to suggest to some that only a small number of prehistoric sites have been located on the forest or in areas of proposed project activity. This is not necessarily the case. Rather, other alternatives usually exist to manage those prehistoric resources located within proposed project areas. First, not all prehistoric sites are "significant" and thus eligible for National Register listing. Many of the Forest's prehistoric sites have been determined ineligible for listing on the National Register and consequently require no further management considerations. Second, if a site is determined eligible. The project often can be redesigned to avoid the resource -- a simple and effective management option. Finally, many times the proposed project activities will be determined to have "no affect" on the site making further work at the site unnecessary.

These are a few of the alternatives that have been implemented for the management of prehistoric resources on the Lolo and Bitterroot National Forests. These forms of creative and cost effective management alternatives have contributed to the effectiveness of the current program and hopefully will ensure that these significant nonrenewable resources will be available for research in the future.

C. Future Goals for the Forest Cultural Resource Management Programs

Both National Forests contain lands that are not directly scheduled for impacts by ground disturbing activities such as timber sales or mining projects. Many of these lands are classified as wilderness, others are proposed wilderness, and others will remain roadless areas.

The Lolo and Bitterroot National Forests should attempt, on a yearly basis, to inventory portions of these lands and evaluate the cultural resources they contain. Although these lands (and their cultural resources) may not be directly impacted by projects, many indirect impacts can occur. For instance, prehistoric sites at high elevations are often fragile in that they contain a limited amount of material in shallow soil deposits. Artifacts often lie directly on or very close to the surface of the ground. The location of these sites can be very predictable and the artifacts are easily recognized even to the untrained eye. Consequently, many of these significant high altitute sites have been or are currently being collected by back-country users. This appears to have happened to many sites along the Montana-Idaho State line as discussed in Section IV of this document.

Both Forests recognize their responsibilities to eventually inventory all the lands they administer under EO 11593, and attempts have been made to do so in the past. The Lolo and Bitterroot National Forests have conducted limited site inventories in the Scapegoat Wilderness (1981), the proposed Great Burn Wilderness (1977), and within the Magruder Corridor (1984). More work remains to be done, however, and it is imperative that long-range systematic inventories continue in these areas.

Such efforts will continue to increase the data base and contribute to the evaluation process of other prehistoric sites as well as complete the Forests' total inventory needs.

Monitoring of previously recorded prehistoric sites has been done in the past, but not on a systematic or scheduled basis. In the future, as more sites are formally evaluated and their National Register eligibility determined, a formal monitoring program should be established for those significant sites. Such a program would help curtail loss of these resources through passive deterioration (erosion, etc.) or illegal collecting activities. The test excavation conducted at the West Fork Rockshelter (24RA36) was prompted by the discovery by District personnel of illegal digging at the site.

In the future, both Forests should attempt to tie in and communicate more closely with the professional archeological research communities in Idaho and Montana. In recent years, the Lolo National Forest has provided information and research topics to individual university graduate students as well as providing survey areas and research topics to university field schools. The results of this interaction can only benefit the Forest Service and the study of regional prehistory.

This overview has identified several research topics critical to specific areas and to the region as a whole. Hopefully, some of these questions will become integrated into the States' (Idaho and Montana) RP-3 process and become general standardized research questions to be addressed by all archeologists conducting future research in the area.

D. Implementation of this Overview

This document should not be considered the definitive statement of the prehistory of western Montana and east-central Idaho. Rather, the authors have attempted to synthesize the current knowledge about the prehistory of the area as well as identify the manner in which this information was gathered. Perhaps more importantly, we have attempted to determine what is not known and identify the kind of data needs and/or research topics which might fill in the gaps in our knowledge. It is hoped that this overview will be used as a starting point for archeologists working in the area in the future.

Please note that this overview exclusively addresses prehistoric or Native American cultural resources. This should not imply to the readers that Euro-American cultural resources from the historic period (1800-1945) are less important than those from the prehistoric periods. A document concerning these significant aspects is a need yet to be done.

After 10 years of a cultural resource management on both Forests, much of which has been condensed into this volume, the Forests have gained considerable credibility and professional rapport with the State Historic Preservation Office (SHPO) and the professional community. This credibility, in conjunction with an overview, should allow us to enter into a Programmatic Memoranda of Agreement (PMOA) with the Montana State Historic Preservation Office for "categorical exclusions" from 36CFR800 preproject cultural resource inventories. Certain types of mineral, timber and road construction/reconstruction projects may no longer require an on-the-ground cultural resource inventory. The SHPO and the Advisory Council on Historic Preservation would be extremely reluctant to grant the Forests this degree of autonomy without our reasonings and data compiled into a document of this type.

Additionally, this overview would be extremely useful if oil and gas exploration were to increase sharply on the Forests. Onshore oil and gas operating order #1 specifies that the surface management agency must provide a nonarbitrary and non-capricious "reason to believe" rationale to lease holders prior to requiring a pre-project cultural resource inventory. This overview will permit the Forest Service to present rationale, legally defensible, for and against preproject inventory to the SHPO, as well as the operators.

Finally, the authors hope this overview has met its intended goals and is a contribution to the understanding of the regional prehistory, and also, that portions of this document will be incorporated into the states' RP-3 planning process. On the other hand, this overview should be viewed as dynamic. That is, as new information is gathered, the results and interpretations of this data will become integrated in the future. Each chapter and appendix has been typed on the Data General word processing system which will easily facilitate this endeavor. Cultural resource inventories will continue to be done, as well as subsurface testing projects and site evaluations. Future research by the professional community and the SHPO's for RP-3 will increase our data, as well as our knowledge, in the coming years. This document should be reviewed at least every 5 years and updated to incorporate important additions to our knowledge. Likewise, the data base (Appendix I-IV) should be reviewed and updated at least every 3 years. If this is done, it will ensure this document remains a significant publication on regional prehistory and an important management tool.

APPENDIX NO. 1

Prehistoric Sites Recorded in Section I
Selway and Salmon Rivers
Bitterroot National Forest, Idaho County, Idaho

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
10IH3	Campsite	Tucannon/ Beaverhead	Recorded	Terrace and confluence of creek with Salmon River	Chert, obsidian quartzite, 1 maul, 6 projectile points
10IH105	Burial	Historic	Recorded	Ridgetop	None
10IH106	Campsite	Tucannon	Recorded	Bench near confluence of two drainages	Obsidian, chert, vitrophrye, bone
10IH107	Campsite	Tucannon	Recorded	Flat adjacent to Selway R.	Scarred trees, McKean stemmed indented base projectile points
10IH108	Undetermined	Harder Blue Dome	Subsurf. Tested	Flat adjacent to Selway R.	Obsidian, basalt, 1 side-notched point
10IH109	Campsite	Unknown	Subsurf. Tested	Terrace above confluence of two drainages	Obsidian, basalt, chert, 1 projectile point tip
10IH110	Campsite	Unknown	Recorded	Terrace above confluence of two drainages	2 flakes
10IH111	Undetermined	Unknown	Subsurf. Tested	Confluence of two drainages	2 obsidian, chert
10IH112	Undetermined	Unknown	Recorded	Flat adjacent to Selway R.	Projectile point fragment
10IH113	Campsite	Unknown	Recorded	Flat adjacent to confluence of two drainages	1 chalcedony flake
10IH114	Undetermined	Unknown	Recorded	Small flat meadow	1 obsidian, 1 red chalcedony flake
10IH116	Depression	Unknown	Recorded	Ridgetop	2 depressions, 1 flake

Prehistoric Sites Recorded in Section I (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
10IH117	Part of Nez Perce Trail	Numipu, Harder	Recorded	Ridgetop	1 flake, parallel ruts, travois tracks?
10IH118	Campsite	Unknown	Recorded	Ridgetop	2 possible house pits, 1 rhyolite knife fragment
10IH119	Undetermined	Unknown	Recorded	Ridgetop probably eroded	1 scraper fragment, 2 flakes
10IOH120	Undetermined	Unknown	Recorded	Ridgetop	1 red chalcedony flake
10IH125	Undetermined	Unknown	Recorded	Flat adjacent to Selway R.	2 grey sedimentary flakes
10IH126	Campsite	Harder,	Subsurf. Tested	Terrace above Selway R.	Obsidian, basalt, chert
10IH127	Lithic Scatter	Unknown	Recorded	Hillside, in trail	1 chert flake
10IH128	Isolate	Unknown	Recorded	Small rocky point	1 point fragment
10IH129	Lithic Scatter? Campsite (10IH107)	Unknown	Recorded	Flat adjacent to Selway R.	Flakes
10IH130	Lithic Scatter?	Unknown	Recorded	Saddle/ridge	1 obsidian flake
10IH132	Lithic Scatter	Unknown	Recorded	Flat adjacent to Selway R.	5 chert flakes
10IH133	Rock Art (Pictograph)	Unknown	Recorded	Shallow cave	2 groups of rock paintings
10IH135	Lithic Scatter	Unknown	Recorded	Ridgetop	1 flake
10IH136	Lithic Scatter?	Unknown	Recorded	Flat below Salmon Mt.	Flakes and shell
10IH137	Lithic Scatter	Unknown	Recorded	Flat on ridge	1 scraper

Prehistoric Sites Recorded in Section I (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
10IH138	Lithic Scatter	Unknown	Recorded	Flat adjacent to Selway R.	1 obsidian flake
10IH140 Possible Site I	Rock Shelter	Unknown	Subsurface Tested	Steep rock face	None
10IH141 Possible Site II	Burial	Unknown	Recorded	Ridgetop	3 bones (removed)
10IH142 Possible Site III	Pithouse/ Teepee Rings	Unknown	Recorded	Drainage bottom	None
10IH143 Possible Site IV	Hot Springs	Unknown	Recorded	Granite bluff	None
10IH144 Possible Site V	Sweathouse?	Unknown	Recorded	Drainage bottom	None
10IH145 Possible Site VI	Rock Shelter	Unknown	Recorded	Rock bluff	None
10IH146 Possible Site VII	3 Pits/Pit-houses?	Unknown	Recorded	Ridgetop	None
10IH147 Possible Site VIII	Rock Shelter	Unknown	Recorded	Rock bluff	None
10IH148 Possible Site IX	Rock Shelter	Unknown	Recorded	Rock bluff	None
10IH149 Possible Site X	Pit	Unknown	Recorded	Ridgetop	Recent bone
10IH150 Possible Site XI	2 Teepee Rings	Unknown	Recorded	Ridgetop	None

Prehistoric Sites Recorded in Section I (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
10IH152 Probable Site I	Teepee Ring	Unknown	Recorded	Terrace	None
10IH153 Probable Site II	2 Pits	Unknown	Recorded	Terrace	None
10IH154 Probable Site III	Teepee Rings	Unknown	Recorded	Alluvial terrace	None
10IH155 Probable Site IV	3 Pits	Unknown	Recorded	Ridgetop	None
10IH156 Probable Site V	Depression	Unknown	Recorded	Terrace	Lithics?
10IH157 Probable Site VI	Camp/Lithic Scatter?	Unknown	Recorded	Terrace	Lithics?
10IH158 Probable Site VI	Lithic Scatter	Unknown	Recorded	Terrace	Lithics
10IH169	Rock Art	Unknown	Recorded	Rock overhang	Shell midden tally marks
10IH172	Pithouse Village?	Harder?	Recorded	Terrace	Full grooved maul Cobble choppers
10IH175	2 Pithouses?	Harder?	Subsurface Tested	Terrace	Unknown
10IH201	Rock Shelter	Unknown	Recorded	Terrace	Shell midden Fire-stained walls
10IH267	Campsite	Unknown	Recorded	Terrace	Unknown
10IH268	Village Site	Unknown	Recorded	River bar	8 chert flakes
10IH443 (Same as 10IH169)	Rock Shelter	Unknown	Recorded	Rocky overhang	Shell midden tally marks and stick figures

APPENDIX NO. 2

Prehistoric Sites Recorded in Section II
Upper Clark Fork and Bitterroot Rivers
Lolo and Bitterroot National Forests
Ravalli, Granite, and Missoula Counties, Montana

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24GN2	Campsite	Late	Recorded	Foothills Sapphire Range	1 pestle, 1 jasper flake
24GN3	Campsite	Unknown	Recorded	Terrace edge	8 basalt flakes, 1 basalt uniface, 1 basalt biface
24GN4	Campsite	Middle/ Late	Recorded	Terrace	1 red chert flake, 53 basalt flakes, 3 basalt cores, 3 flakes
24GN5	Campsite	Middle/ Late	Recorded	Bottomland	15 arrowheads, 4 pestles, 2 grooved mauls
24GN10	Campsite	Unknown	Recorded	Terrace	Basalt, chert flakes
24GN11	Campsite	Unknown	Recorded	Terrace	Basalt, quartzite flakes
24GN12	Campsite	Unknown	Recorded	Terrace	Chert, 1 core, chert flakes
24GN13	Campsite	Middle/ Late	Recorded	Terrace	1 jasper core, 1 scraper, 1 red chert point
24GN26	Campsite	Unknown	Recorded	Terrace	3 basalt flakes, 10 obsidian uniface, 4 chert flakes, 1 chert shatter
24GN24	Campsite	Middle Period	Recorded	Grassy Flat	Corner-notched point, chert core
24GN27	Lithic Scatter	Middle	Recorded	Level Plain	1 end scraper, 1 biface, 6 cores, 7 chert flakes

Prehistoric Sites Recorded in Section II (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24GN28	Cairn	Unknown	Recorded	Talus Slope	None
24GN29	Campsite	Unknown	Recorded	Open Meadow	Chert Flakes
24GN30	Cairn	Unknown	Recorded	Knob on Ridge	None
24GN31	Campsite	Unknown	Recorded	Terrace	Brown chert flakes
24GN34	Quarry	Unknown	Recorded	Ravine	1 chert core, 2 chert flakes, 4 chert shatters
24GN130	Lithic Scatter	Middle	Tested	Meadow	69 flakes, 2 bifaces
24GN135	Scarred Trees	Unknown	Recorded	Confluence of Creeks	None
24GN138	Campsite	Unknown	Recorded	Confluence of Creeks	1 red chert side scraper
24GN196	Scarred Trees	Unknown	Recorded	Terrace	None
24GN200	Lithic Scatter/ Campsite	Unknown	Recorded	Ridgetop	11 flakes, 1 knife scraper tool
24GN201	Lithic Manufacturing	Unknown	Recorded	Saddle	1 flake, 1 shatter
24GN203	Campsite	Late	Subsurface Tested NRHP(E)	Ridgetop	44 flakes, 1 side scraper, 2 projectile points

Prehistoric Sites Recorded in Section II
Ravalli County

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24RA7	Pictographs	Unknown	Recorded	Granite Outcrop	None
24RA8	Campsite	Unknown	Recorded	Hilltop	Red thumbnail scraper
24RA36	Rock Shelter	Middle Period	Subsurface Tested	Rock Overhang	13 proj. points, knives, scrapers, bone, flakes
24RA37	Campsite (Hearth)	Unknown	Recorded	Terrace	Bone chips
24RA38	Rock Shelter	Unknown	Recorded	Rock Overhang	None
24RA39	Rock Shelter	Unknown	Recorded	Rock Overhang	1 point base, 1 point tip, 1 retouched flake
24RA40	Buried Campsite	Middle	Recorded	Terrace	Projectile point, flakes, butchered bone
24RA41	Campsite/ Scarred Trees	Unknown	Recorded	Terrace	Chert flakes
24RA42	Buried Occupation (Fire Hearths)	Unknown	Recorded	Terrace	Scraper fragment
24RA43	Buried Occupation	Unknown	Recorded	Meadow	Chert and basalt flakes
24RA44	Scarred Trees	Unknown	Recorded	Terrace	None
24RA45	Pictograph/ Rock Shelter	Unknown	Recorded	Rock Outcrop	None
24RA46	Lithic Scatter	Unknown	Recorded	Saddle	4 flakes
24RA48	Lithic Scatter	Unknown	Recorded	Lake Shore	5 chert flakes
24RA49	Campsite	Middle	Recorded	Saddle	4 proj. points, 2 side scrapers, 2 spoke shaves, 1 blade frag.

Prehistoric Sites Recorded in Section II (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24RA54	Stone	Unknown	Recorded NRHP (not E)	Hilltop	None
24RA55	Lithic Quarry	Unknown	Recorded NRHP (not E)	Outcrop on Ridge	Chert cores, flakes, spalls, chopper, 3 retouched flakes
24RA56	Lithic Quarry	Unknown	Recorded NRHP (not E)	Outcrop	Large chert flakes, preforms blanks, cores, retouched flake
24RA58	Campsite	Late Archaic	Recorded	Creek Confluence	Flake, flakes
24RA59	Rock Art	Unknown	Recorded	Rock Face	None
24RA60	Rock structure	Unknown	Recorded	Circular Depression	None
24RA61	Scarred Trees	Unknown	Recorded	Foothills/Alluvial Plain	None
24RA62	Campsite	Late Plains/ Archaic	Recorded	Terrace	Flakes, point fragment scraper
24RA63	Campsite	Unknown	Recorded	Natural Clearing	"Gray volcanic flakes"
24RA64	Campsite	Unknown	Recorded	Natural Clearing	10 gray volcanic flakes
24RA65	Scarred Trees	Unknown	Recorded	Foothill/Alluvial Plain	None
24RA70	Lithic Quarry	Unknown	Recorded NRHP (not E)	Outcrop	Flakes, cores, spalls, blanks, and preforms
24RA71	Quarry	Unknown	Recorded NRHP (not E)	Outcrop	Cores, flakes, spalls, blanks, and preforms
24RA72	Quarry	Unknown	Recorded NRHP (not E)	Outcrop	Flakes, cores, spalls, blanks, and preforms
24RA73	Quarry	Unknown	Recorded NRHP (not E)	Outcrop on Ridge	Flakes, cores, spalls, blanks, and preforms
24RA74	Quarry	Unknown	Recorded NRHP (not E)	Outcrop on Ridge	Flakes, cores, spalls, blanks, and preforms

Prehistoric Sites Recorded in Section II (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24RA75	Quarry	Unknown	Recorded	Outcrop on Ridge	Flakes, cores, spalls, blanks, and preforms
24RA80	Campsite	Unknown	Recorded	ridge	5 flakes
24RA86	Lithic Scatter	Unknown	Recorded	Saddle in Pass	Flakes
24RA87	Scarred Trees	Unknown	Recorded	Foothills/Alluvial Plain	None
24RA125	Scarred Trees	Unknown	Recorded	Terrace	None
24RA127	Rock Cairns	Unknown	Recorded	Ridge Crest	None
24RA128	Scarred Trees	Unknown	recorded	Ridge	None
24RA129	Campsite	Unknown	Recorded	Saddle on Ridge	3 flakes
24RA130	Campsite	Unknown	Recorded	Terrace	Flakes
24RA135	Campsite	Unknown	Recorded	Terrace	Flakes
24RA136	Campsite	Unknown	Recorded	Saddle on Ridge	2 chips, 1 flake
24RA138	Stone Cairns	Unknown	Recorded	Ridge	None
24RA143	Campsite	Late	Recorded	Terrace	Red chert flakes, projectile point midsection
24RA154	Campsite	Middle to Late	Tested	Valley Bottom	1 late period proj. point, flakes
24RA155	Campsite	Unknown	Recorded	Lake Beach	34 flakes and chips, 1 broken knife
24RA156	Campsite	Unknown	Tested	Terrace	15-20 flakes, 1 drill fragment

Prehistoric Sites Recorded in Section II (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24RA157	Lithic Scatter/	Middle	Recorded	Saddle on Ridge	20 flakes, 2 pieces of projectile point
24RA167	Campsite	Middle	Recorded	Stream Valley	1 obsidian C-N point base, 1 biface, 2 flakes
24RA168	Campsite	Unknown	recorded	Stream Valley	4 flakes, 1 bonechip
24RA170	Stone Cairn	Unknown	Recorded	Knob on Ridge	None
24MO73	Campsite	Unknown	Recorded	Knob on Saddle	1 basalt corner-notched point, 6 large flakes
24MO74	Lithic Scatter	Unknown	Recorded	Saddle on Ridge	3 basalt flakes
24MO26	Campsite	Middle	Recorded	Mountainside	3 points, 1 blade

Prehistoric Sites Recorded in Section II
Non-Forest Service Studies

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
Flint 1977					
24GN65	Quarry (Pigment)	Proto-historic	Recorded	Unknown	Unknown
24GN62	Quarry (Chert)		Recorded	Subalpine Pack	Flakes, blades, cores, choppers
24GN63	Medicine Tree	Proto-historic	Recorded	Spur Ridge	Basalt knife, basalt scrapers
24GN116	Campsite	Historic	Recorded	Terrace	Quartzite knife, chalcedony scraper
24GN117	Campsite	Late	Recorded	Alluvial Valley	Conical pestle, side-notched point
24GN64	Burial	Unknown	Recorded	Talus Slope	War Club
Ward 1973					
24RA501	Rock Art	Unknown	Recorded	Rock Face	None
24RA502	Rock Art	Unknown	Recorded	Rock Outcrop	None
24RA503	Rock Art	Unknown	Recorded	Rock Outcrop	None
24RA504	Rock Art	Unknown	Tested	Outcrop	None
24RA505	Rock Art	Unknown	Recorded	Outcrop	None
24RA506	Rock Shelter/Pictograph		Tested		
24RA508	Campsite	Late	Tested	Terrace	Mauls, basalt flake
24RA509	Campsite	Late	Recorded	Terrace	Pipe, oblate maul, edge ground cobble

Prehistoric Sites Recorded in Section II
Non-Forest Service Studies (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24RA510	Burial	Unknown	Tested	Terrace	Drill, graver/scraper bone beads
24RA511	Scarred Tree	Unknown	Tested	Terrace	Flakes
24RA512	Campsite?	Late	Tested	Terrace?	Pestle, jasper knife
24RA513	Medicine Tree	Late	Recorded	Riverbank	None
24RA514	Scarred Trees	Unknown	Tested	Saddle	Pestle, obsidian flake
24RA515	Campsite	Late Archaic	Recorded	Meadow	Corner-notched points, flakes
24RA516	Campsite	Unknown	Tested	Meadow	Flakes
24RA517	Campsite	Middle-Late	Recorded	Terrace	Basalt, jasper points, hammerstones, mauls, pestles, knives, and scrapers
24MO1082	Campsite	Middle-Late	Tested	Terrace	Several projectile points, knives, scrapers, etc.
24MO1002	Unknown	Unknown	Excavated	Flood Plain/ Bench	None
Taylor 1978					
24GN1001	Rock Art/ Campsite	Middle-Late	Excavated	Rock Outcrop	Flakes, 2 pelican lake points, 6 late

APPENDIX NO. 3

Prehistoric Sites Recorded in Section III
Clearwater and Blackfoot Rivers
Lolo National Forest, Powell and Missoula Counties, Montana

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24PW202	Lithic Scatter	Early/ Middle	Recorded	Terrace	Agate basin, Pelican Lake, projectile points, chert, flakes,
24PW198	Lithic Scatter	Middle	Recorded	Terrace	McKean point, flakes
24PW203	Lithic Scatter	Unknown	Recorded	Terrace	5 flakes
24PW204	Lithic Scatter	Unknown	Recorded	Cutbank	3 obsidian flakes, bone
24PW205	Lithic Scatter	Unknown	Recorded	Terrace	Chert flakes
24PW206	Campsite	Unknown	Recorded	Lakeshore	1 uniface, chert, retouch flakes
24PW207	Lithic Scatter	Middle	Recorded	Terrace	Oxbow point, 5 flakes
24PW208	Lithic Scatter	Unknown	Recorded	Unknown	2 bifaces, 54+ flakes, 2 retouched flakes
24PW209	Lithic Scatter	Unknown	Recorded	Terrace	McKean point, flakes
24PW238	Lithic Scatter	Unknown	Recorded	Glacial lake basin	5 basalt flakes
24PW329	Lithic Scatter	Unknown	Recorded	Peninsula	4 flakes, 1 drill, fragment, pottery?
24PW330	Campsite	Unknown	Recorded	Lakeshore	1 scraper, flakes
24PW332	Occup.	Unknown	Recorded	Terrace	1 scraper, flakes
24PW1061	Lithic Scatter	Unknown	Recorded	Lakeshore	Flakes and tools

Prehistoric Sites Recorded in Section III (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24PW1059	Lithic Scatter	Unknown	Recorded	Terrace	Flakes
24PW1066	Lithic Scatter	Unknown	Recorded	Ridge	8 basalt flakes, 1 quartzite flake
24PW1071	Buried Lithic Scatter	Middle/ Late	Tested	Terrace	Biface thinning flakes tools, arrowheads
24MO14	Campsite	Unknown	Recorded	Terrace	1 basalt flake, brown chert flake
24MO15	Campsite	Late	Recorded	Terrace	Washita varient, flakes
24MO16	Campsite	Unknown	Recorded	Terrace	Flakes, scrapers, broken agate point
24MO17	Campsite	Unknown	Recorded	Terrace	1 point, 1 obsidian flake, flakes
24MO18	Campsite	Unknown	Recorded	Terrace	Flakes
24MO20	Campsite	Unknown	Recorded	Terrace	1 point, 1 retouched flake, flakes
24MO21	Campsite	Unknown	Recorded	Terrace	Flakes, basalt knife
24MO22	Campsite	Unknown	Recorded	Lakeshore	Unknown
24MO58	Lithic Scatter	Unknown	Recorded	Lakeshore	8 basalt flakes, 1 chert flake
24MO81	Campsite	Middle/ Late	Recorded	Terrace	5 points, flakes, scraper
24MO135	Scarred Tree	Unknown	Recorded	Hillslope	None
24MO145	Campsite	Unknown	Recorded	Terrace	Lithics
24MO146	Lithic Scatter	Unknown	Recorded	Terrace	Lithics
24MO147	Lithic Scatter	Unknown	Recorded	Terrace	Flakes

Prehistoric Sites Recorded in Section III (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24MO148	Lithic Scatter	Unknown	Recorded	Terrace	Lithics
24MO149	Teepee Rings	Middle/ Late	Recorded	Terrace	Chert, biface flakes of chert, chalcedony
24MO150	Campsite	Unknown	Recorded	Terrace	Chert and chalcedony flakes
24MO152	Workshop	Unknown	Recorded	Ridge	Chert, end scraper
24MO154	Campsite	Unknown	Recorded	Terrace	1 knife, scraper
24MO197	Campsite	Unknown	Tested	Terrace	3 chert flakes
24MO701	Campsite	Middle/ Late	Tested	Terrace	Scraper, worked flakes and broken point
24MO1003	Lithic Scatter	Unknown	Excavated	Terrace	10 basalt flakes, 1 chert, 1 agate flake, 1 jasper flake
24MO1071	Burial	Late	Excavated	Terrace	1 scraper, 1 blade, 2 bone whistles, bone hoops
24MO1081	Campsite	Middle	Recorded	Terrace	Knife, scraper, McKean point, 15 basalt flakes
24MO1084	Campsite?	Middle	Tested	Terrace	Besant point, basalt and chert flakes
24MO1093	Stone Cairns	Unknown	Tested	Terrace	None

APPENDIX NO.4

Prehistoric Sites Recorded in Section IV
Lower Clark Fork and Flathead Rivers
Sanders, Mineral and Missoula County, Montana
Lolo National Forest

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24MO27	Quarry	Unknown	Recorded	Terrace?	Ovoid knives (con't)
24MO28	Campsite	Unknown	Recorded	?	2 basalt point, knives (con't)
24MO29	Campsite	Unknown	Recorded	?	Knife, Pine Cr. shale, flakes
24MO30	Campsite	Unknown	Recorded	?	Pine Creek jasper and basalt flakes
24MO31	Campsite	Unknown	Recorded	?	Basalt point and basalt flakes, jasper flakes
24MO32	Campsite	Unknown	Recorded	Terrace	Points, scraper, pottery?
24MO33	Campsite	Unknown	Recorded	Terrace	Flakes
24MO34	Campsite	Unknown	Recorded	Saddle	Point, graver, flakes
24MO35	Campsite	Middle	Excavated	Spring	Fragment, 1 basalt scraper (con't)
24MO40	Lithic Procurement	Unknown	Recorded	Terrace	Points, blanks, flakes
24MO41	Campsite	Middle	Recorded	Flood Plain	Basalt point and flakes
24MO42	Campsite	Middle	Recorded	Terrace	Basalt C-N point, 2 blades, flakes
24MO44	Lithic Scatter	Unknown	Recorded	?	Pine Creek shale flakes
24MO47	Lithic Scatter	Unknown	Recorded	?	Flakes

Prehistoric Sites Recorded in Section IV (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24MO48	Campsite	Late	Excavated	Terrace	Flakes, point scrapers, knife
24MO49	Lithic Scatter	Unknown	Recorded	?	Flakes
24MO50	Quarry	Unknown	Recorded	Terrace	Flakes
24MO55	Quarry	Unknown	Recorded	?	Cores, flakes, retouched flake
24MO58	Lithic Manufacture	Unknown	Recorded	Lakeshore	8 basalt flakes, 1 chert flake
24MO69	Lithic Scatter	Unknown	Recorded	Saddle	Basalt point, basalt flake
24MO70	Campsite	Unknown	Recorded	Saddle	Spokeshave, basalt flakes
24MO80	Campsite	Middle/ Late	Recorded	Terrace	Scraper, flakes
24MO81	Campsite	Middle/ Late	Excavated	Terrace	5 points, scraper, flakes
24MO105	Campsite	Unknown	Recorded	Terrace	Point, scraper, flakes
24MO112	Scarred Trees	Unknown	Recorded	Hillslope	None
24MO113	Scarred Trees	Unknown	Recorded	Hillslope	None
24MO114	Stone Cairn	Unknown	Recorded	Moutain Summit	None
24MO120	Campsite	Proto-Historic	Tested	Terrace	23 basalt flakes, 1 Pine Creek shale, biface (1) metal trade bead, (3) glass beads
24MO139	Stone Cairn	Unknown	Recorded	Talus Slope	None

Prehistoric Sites Recorded in Section IV (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24MO162	Campsite	Middle	Recorded	Knoll	Flakes, drill, bifaces, projectile points
24MO501	Campsite	Middle	Recorded	Terrace	53 basalt flakes, 29 green obsidian flakes
24MO502	Campsite	Unknown	Recorded	Terrace	67 basalt flakes and cores, 2 perforators, 1 thumb
24MO503	Campsite	Late	Recorded	Terrace	Avonlea point, 2 basalt cores, 110 basalt flakes, 1 basalt
24MO504	Campsite	Middle/ Late	Recorded	Terrace	McKean, Duncan, corner-notched and side-notched
24MO505	Rock Art	Unknown	Recorded	Outcrop	None
24MO506	Campsite	Late	Recorded	Terrace	Basalt, green obsidian, chert, chalcedony, siltstone
24MO507	Campsite	Late	Recorded	Terrace	Basalt flakes, 9 points, 2 perforators, spokeshave
24MO508	Lithic Scatter	Unknown	Recorded	Sandbar	Basalt flakes, 3 projectile points
24MO509	Lithic Scatter	Middle/	Recorded	Terrace	3 basalt flakes, 6 scrapers, 1 bone awl, 1 conical
24MO510	Campsite	Unknown	Recorded	Meadow	9 knives, 2 choppers, end, side, Plan-convex

Prehistoric Sites Recorded in Section IV (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24MO511	Campsite	Middle	Recorded	Terrace	1 point, 5 drills and knives, 7 scrapers,
24MO512	Campsite	Middle/ Late	Recorded	Terrace	Obsidian, chert and flakes
24MO513	Campsite	Middle/ Late	Recorded	Meadow	3 basalt perforators, 2 basalt avoid knives
24FH56	Stone Cairn	Unknown	Recorded	Knob on Ridge	None
24FH83	Stone Cairn	Unknown	Reocrded	Cliff	None
24MN11	Campsite	Middle	Recorded	Saddle	Chips, 1 basalt point 1 knife fragment, 1 vitrophyre chip
24MN13	Stone Cairn	Unknown	Recorded	Cliff	None
24MN18	Lithic Scatter	Unknown	Recorded	Terrace	3 chips
24MN20	Quarry	Middle/ Late	Recorded	Saddle	3 points, 1 blade 9 flakes
24MN21	Campsite	Unknown	Recorded	Saddle	1 Blade, flakes
24MN22	Campsite	Middle/ Late	Recorded	Ridge	3 points, black, snub-nosed scraper, flakes
24MN23	Campsite	Unknown	Unknown	Saddle	Flakes
24MN24	Campsite	Unknown	Recorded	Saddle	Flakes
24MN25	Campsite	Unknown	Recorded	Saddle	Brown chert knife, flakes
24MN26	Campsite	Middle/ Late	Recorded	Saddle	3 point fragments, 1 blade, flakes

Prehistoric Sites Recorded in Section IV (Continued)

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24MN27	Campsite	Late	Recorded	Saddle	Brown chert point, chert flake, misc. flakes
24MN44	Campsite	Unknown	Recorded	Saddle	Basalt knife, basalt flake, red chert flake
24MN45	Lithic Scatter	Middle	Recorded	Saddle	2 point bases, 1 basalt blade, 2 re-touched flakes
24MN46	Lithic Scatter	Unknown	Recorded	Base of Hill	Flakes
24MN47	Lithic Scatter	Late	Recorded	Saddle	1 point, 2 worked flakes, flakes
24MN48	Lithic Scatter	Middle	Recorded	Saddle	2 broken point, flakes, 1 retouched flake
24MN49	Lithic Scatter	Unknown	Recorded	Saddle	2 scrapers, 1 re-touched flake, flakes
24MN78	Campsite	Unknown	Recorded	Terrace	2 flakes, 1 end scraper, 1 side scraper, 1 spokeshave
24MN113	Stone Pile	Unknown	Recorded	Outcrop	None
24MN138	Lithic Scatter	Unknown	Recorded	Ridge	Basalt flake, chert biface
24MN1061	Campsite	Middle/ Late	Tested	Terrace	1 chert perforator, 28 projectile points, 1 blade
24MN1062	Campsite	Late	Recorded	Beach	Basalt and green obsidian flakes, knife tip, corner-notched
24MN1063	Campsite	Middle	Recorded	Terrace	McKean (variant) point

SITE NO.	SITE TYPE	TIME PERIOD	MANAGEMENT STATUS	TOPOGRAPHIC SETTING	ARTIFACTS RECORDED
24MN1064	Unknown	Midddle	Recorded	?	Corner-notched point
24MN1065	Campsite	Late	Recorded	Terrace	14 basalt flakes, 1 point, 2 flint flakes
24MN1066	Campsite	Late	Recorded	Terrace	Grooved maul, 2 pestles, projectile points
24MN1067	Campsite	Late	Recorded	Terrace	5 points, 2 basalt side-scrapers
24MN1068	Campsite	Middle/ Late	Recorded	Terrace	1 scraper, 2 spoke-shaves, 4 perfora-tors, knife tip
24MN1069	Campsite	Middle	Tested	Terrace	1 basalt knife tip, 1 knife base, chert perforator
24MN1070	Unknown	Middle	Recorded	Terrace	Oxbow point, basalt knife, basalt flakes
24MN1071	Unknown	Middle	Recorded	Terrace	2 projectile points, flint scraper, flint blade
24MN1072	Unknown	Unknown	Recorded	Terrace	Flint core, basalt scraper, blint blade, grooved river cobble
24MN1073	Campsite	Unknown	Tested	Terrace	Basalt flakes, 1 chert flakes, 1 piece of drilled slate
24MN1074	Campsite	Middle/ Late	Recorded	Terrace	Basalt and flint flakes, 1 side scraper, 1 ovoid knife

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