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JASPER NATIONAL PARK
ARCHAEOLOGICAL INVENTORY

by
ROSS ANDERSON
B. O. K. REEVES

(March 1975)
PARKS CANADA

DEPARTMENT OF INDIAN AND NORTHERN AFFAIRS
Jasper National Park
Archeological Inventory
by Ross Anderson &
B.O.K. Reeves
March 1975
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During the summers of 1970 and 1971, an archaeological survey of Jasper National Park was carried out under contract No. 71-44 between DINA and the University of Calgary. This inventory was designed to locate, record and assess prehistoric sites, concentrating on the high visitor use areas. The inventory concentrated on the Athabasca Valley, tributary valley junctions, and the Snake Indian drainage basin. Some 66 archaeological sites were found. Of these, 48 are prehistoric in age, 16 historic and two contain both prehistoric and historic occupations. The recording of historic sites was incidental to the project aims.

In addition, some 46 sites were found in regions adjacent to the east and north Park boundary. The coverage of specific areas of the South Sulphur, Wildhay, and Athabasca drainages provided integral data for overall interpretation of the Park's past history and prehistory.

The historic sites located include fur trade sites, such as the probable location of Laroque's or the last Henry House and the second Jasper House. Both are of considerable value. In addition to these, various cabins, cabin remains, tipi frames and log crib burials were recorded. These relate to later settlement of the Park, primarily by people of mixed blood descent.

The historic sites are individually described and assessed, and a brief review of the fur trade/settlement history and Native history is presented to place these in historical perspective. Review of the pertinent literature indicates various small groups of Native peoples frequented the areas, including the Shuswap, Iroquois, Stoney, Cree, Sarci, Sekani and other Athapascans. The latter were probably the prehistoric residents.
Prehistoric sites are also individually described and assessed, while the archaeological inventory was primarily oriented towards this purpose, analysis of collected artifacts, the sites -- campsites, workshops -- and other data provides some insights into the complexity of Jasper Park prehistory and settlement.

Human occupation, on the basis of projectile point types found, extends back some 10,000 years in the Athabasca Valley to the closing millennia of the last ice age. Since then, much of the Park's prehistory is one of shifting cultures, possibly in response to environmental change. Artifact and lithic type analysis indicates peoples of Northern Plains/Rocky Mountains, Interior Plateau, and Northern Boreal Forest/Cordilleran affiliation frequented the Park at various times.

Prehistoric site locational analysis and consideration of environmental and historic data indicates a specific use pattern in prehistoric times. The location of suitable land surfaces for encampments, and seasonal availability of ungulates structured this settlement pattern. Distinctive use patterns were found in the Athabasca and Snake Indian drainages. These are thought to be largely unrelated, with use of the Snake Indian related to seasonal movements of people between it and the Smoky by way of Glacier Pass. A large quarry/workshop complex was found in this pass, where a very distinct lithic material was derived. Its site distribution is limited to the Snake Indian.

The archaeology, both historic and prehistoric, of Jasper is unique, reflecting its particular environmental variables and geographic locations. The sites are of value, particularly certain historic sites which have regional, if not National, significance. The resource values, as represented in the sites, are impaired to varying degrees today. Some are subject to ongoing degradation, for locations of past and
current visitor facility developments and archaeological sites often coincide.
ACKNOWLEDGEMENTS

The following people are thanked for their assistance and contributions, both during the inventory and during the writing of this report.

During the inventory, numerous peoples provided assistance necessary to bringing about successful results, particularly members of the Jasper National Park Warden Service and guide and outfitter, John Ward (Jasper), for the freedom necessary in implementing the inventory in the northern portion of the Park. Rick and Ann Bronson, and Ed and Anne Moberly provided hospitality and insights to Jasper National Park region history. I am especially grateful to members of the Jasper-Yellowhead Historical Society, in particular Ian Coates, "Mac" Elder, and Mrs. C.G. Peterson, for invaluable historic data, which was unselfishly supplied, and for allowing the Bried Collection to be photographed.

With regard to the report, the following people are to be acknowledged for their assistance and participation. I am especially grateful to Kate Connolly for typing the first rough draft and her continued assistance through to the completion of the report. Nona Higgs typed the second and final drafts. Diane Malmberg did the graphics and Barry MacDonnell, the photographic plates. I would also like to express my thanks to Dianne Arnold, Kate Connolly, Diane Malmberg, and Renee Thompson for their support and assistance during the assemblage of the accompanying manuscripts.

Brian Reeves edited the text and wrote Chapter 5: Archaeological Resource Management and Interpretation. Finally, I would like to take this opportunity to thank Jack Elliott and Brian Reeves for their continuous support -- both have been the prime motivators providing impetus to my interest in archaeology.
INTRODUCTION

Under contract No. 71-44 between the Department of INA and the University of Calgary and archaeological inventory of Jasper National Park was carried out during the summers of 1970 and 1971. The results of these two summers' work were presented in separate preliminary reports (Elliott 1970-71). This, the final report on the inventory, incorporates, interprets and analyzes the data gathered during both field seasons.

The initial archaeological inventory of Jasper National Park was implemented June 1 to July 31, 1970. The survey crew consisted of four experienced personnel -- the senior author, Wayne Choquette, and Andy Graspointner, directed by Jack Elliott -- all students at the University of Calgary. Areas covered during this two month period included the Athabasca Valley, from the Sunwapta River junction to the vicinity of Hinton; the Whirlpool Valley, from the Athabasca confluence to Scott Glacier; the Tonquin Valley; the Miette Valley and Yellowhead Pass; and the Maligne Valley and Lake.

In 1971 the inventory was continued. The survey crew consisted of the senior author and Jack Elliott. June 1 to July 30th was spent in the northern areas of the Park, where the Snake Indian River, Willow Creek, Deer Creek, Mowitch Creek, Blue Creek, Hardscrabble Pass, West and South Sulphur Rivers, Glacier Pass, Rock Creek, Eagle's Nest Pass, Grizzly Creek, Wolf Creek, Wolf Pass, Moosehorn Lakes and River were covered. August 1 to 30th was spent surveying Rock Lake, Wildhay River, and selected areas west of the Grande Cache Highway, north to Fred Creek. Lower Snake Indian Valley, Princess and Celestine Lakes, and specific areas in the Athabasca Valley were also checked. Mr.
Gordon Bried, the only major artifact collector in the area, was interviewed, and provenience for various artifacts in his collection established. The Bried Collection was photographed.

The original objective of the survey was to locate and to record only those sites of prehistoric and historic Native origin. Requests by members of the Jasper-Yellowhead Historical Society and the National Historic Parks & Sites Branch to locate and designate fur trade associated structures, and the advent of numerous log structures or structural remains in isolated areas, resulted in the inclusion of historic sites in the inventory as they were encountered.

The inventory recorded 66 archaeological sites, consisting of 16 historic, 48 prehistoric and two site known to contain both prehistoric and historic occupations. In addition, brief surveys of adjacent Park areas to provide data on movements of peoples, and to more fully understand what influences and patterns were present in the Park archaeology, located an additional 46 archaeological sites.

It is from the data collected during the inventory and the Bried Collection that this report is derived. An inventory is designed to locate and record archaeological resources, and the data obtained is only an indication of past human activities. The interpretations of this report are based on this data, and are a first approximation only. It is only through controlled excavations that the necessary data can be obtained to interpret past events.

The report is the first descriptive and interpretive archaeological work to be prepared within the region between the Bighorn Reservoir on the North Saskatchewan to the south (Reeves n.d.), and the Peace River Block (Thompson 1973) to the north. Not only is data lacking on the
Rocky Mountains to the north, but also on vast regions of the Western
Boreal Forest, west and north of the Parklands. Similarly in the mountaintous west, in British Columbia, contiguous areas of the Upper
Thompson, Fraser and Columbia Rivers are archaeologically unknown.

Due to the lack of specific local and regional archaeological data
for comparison, it was necessary to compare the artifacts from Jasper
to materials acquired 100's of kilometers distant from the Park. Conse­quently the interpretations presented in the report are tentative at best. We hope, however, the report, in addition to recording the
primary historic and prehistoric site data and values required for
management purposes, does provide useful interpretive data and a frame­work on which to base future work.

PREVIOUS WORK AND COLLECTIONS

Jasper National Park and adjacent regions was an unknown archaeo­logical frontier prior to our work in 1970. Previous work by profes­sionals had been limited to two brief visits; in the 1950's by Douglas
Leechman, then of the National Museum of Man. Leechman, while vacationing
in the Park, briefly inspected some of the sites which Gordon Bried had
discovered. In 1967, following the discovery of the Devona Cave (FhQm-1),
Jervis Swannack of the National Historic Parks & Sites Branch, inspected
the cave.

Apart from these brief forays, Park archaeology has been restricted
to artifact collecting by local residents. Of these, the only extensive
extant collection is that of Gordon Bried. Mr. Bried, a former long­term resident of the Park, presently residing in Kamloops, B.C.,
collected artifacts from the Athabasca Valley over a period of some 30
years. During this time, he noted locations where artifacts had come from,
and devised his own cataloguing system. His collection was considerable by the time he had departed for Kamloops, and he left the bulk of it (including archival and historic materials) in storage at the Pallisades Ranch, under the care of the Park Service. During the following years the collection was gradually stolen. Nothing remains of the prehistoric artifacts today. Mr. Bried had fortunately retained a smaller collection, which he donated to the Jasper-Yellowhead Historical Society. It is this same collection, consisting of 44 chipped stone artifacts, one incised bone fragment, and one historic gunflint, which has been incorporated into this report.

Of the 44 chipped stone artifacts, 32 are projectile points. Only four points have locational data. These have been included with the applicable site recorded in the inventory. Those remaining, plus seven small bifacial tools and two endscrapers, have no provenience other than between Jasper Townsite and the east park gate. The projectile points have been included in the comparative projectile point analysis (Appendix 2) and the small tools were analyzed separately and presented in Appendix 3. The Bried Collection provided useful data on past cultures, and site areas now destroyed by construction and development.

Following the completion of the 1971 field inventory the existence of another collection was brought to our attention. A Mr. M. E. Allen, a former school teacher, had spent some summers in the Park searching for artifacts. Some time later, he moved to Parksville, Vancouver Island, and his collections were displayed in the Indian Chief Museum. Upon visiting the museum, now known as the Canadiana Museum, only six chipped stone artifacts were displayed from the Park. These consisted of a single side notched projectile point and five small scraping tools.
The artifacts were apparently recovered from only two locations; the projectile point from the Patricia Lake area, and the scraping tools from the Edna and Talbot Lake locality.

FIELD METHODOLOGY

In 1970 the areas which were surveyed were generally those areas accessible by road. Most of the Athabasca Valley was surveyed on foot with drops and pickups being arranged by vehicle where ever possible. Day hikes were undertaken when necessary and overnight or multiple day hikes on occasion (e.g. Tonquin Valley). Horses were used only once, on a trip up the Whirlpool River to Scott Flats.

All subsurface exposures were checked; road cuts, human and animal trails, terrace margins, barrow pits, wind eroded flats, and heights of land, the pipeline right of way, and lake margins. Thirteen prehistoric and 9 historic sites were located.

The nature and apparent scarcity of sites in the mountainous regions of the Athabasca Valley necessitated a survey of the extra-montane Athabasca Valley (i.e. to the vicinity of Hinton) to determine if there were discernible prehistoric site patterns adjacent to the Park, which might be present and not recognized within the Park boundaries. This survey located 13 sites.

In the intermontane Athabasca Valley, many potential archaeological sites locales were either covered with dense vegetation or had been altered by past or ongoing developments. In the areas of limited or non-existent subsurface exposures, small test excavations were dug to determine if prehistoric occupations were present, most often they were not. In conjunction with the Jasper-Yellowhead Historical Society, testing was undertaken to attempt to determine the nature of depressions
in the Cottonwood Flats area with the possibility of identifying and establishing the location of the last Henry House or Laroque's House (see pp.25f and Pl. 1:A).

In 1971 the northern portion of the Park, primarily the Snake Indian drainage, was surveyed by horseback. Over 960 km were travelled and surveyed. In this region dense forest and grass cover is continuous. Surficial erosion, allowing subsurface exposures, is limited to the horse trails, wind deflated promontories, and terrace margin slumpage or slope erosion due to spring runoff or riverine action. In checking these exposures most of the suitable landforms and tributary creeks were surveyed. Thirty-four sites were located.

In August 1971 the survey returned to vehicle transport with the southern routes into the Snake Indian Valley being checked (e.g. the Wildhay River-Rock Lake drainage), outside the Park, as it was apparent that routes other than from the Athabasca Valley up the Lower Snake Indian Valley had been utilized. Sites had not been found in that area. Examination of the Bried Collection in 1972 also provided insights into the Park archaeology which had not been apparent before. Bried had collected from a number of campsites now destroyed by construction activities. With this additional data, a more complete picture of the Park's archaeology was obtained.

During the survey aerial photograph interpretation was utilized to determine potential site locations. With the discovery of a site, the following procedure was implemented. The site location was plotted on the pertinent aerial photograph and topographic map (NTS 1:50,000, and on occasion the Jasper Park North and South sheets, 1:190080).

Locational and descriptive data on both the site and material
collected were recorded on site survey forms. In 1970 both a polaroid black and white and a colour 35 mm slide were taken of each site, with the black and white polaroid photograph stapled to each survey form. However, in 1971 because of the nature of the survey logistics, only colour 35 mm slides of each site were taken and the site locations were sketched on the reverse side of the survey form.

Artifact collection was complete. Any discernible intra-site differences were noted, either in the notes or on the survey forms. The material collected was placed in artifact bags, which were labelled with a code, and the bag code was recorded on the survey form. The artifacts collected were taken to the University of Calgary, where they were labelled and catalogued. The artifacts are presently in storage and the site forms on file at the Department of Archaeology, University of Calgary.

REPORT FORMAT

Chapter 2 briefly describes the salient characteristics of the Park's environment which relates to the understanding of prehistoric and historic settlement and utilization patterns. Historic sites located and historic peoples are dealt with in Chapter 3, which includes Native, Metis and European peoples and their utilization of the Park region. Historic site locational data and evaluation data are summarized in Table 1 and site locations shown on Map 1. Plates 1 through 3 are photographs of some of the more important historic sites.

Chapter 4 describes the prehistoric sites found. Summary locational and evaluational data are found in Table 2 and the site locations on Map 2. Selected sites are illustrated on Plates 4 through 9. The distribution by site of technological types and lithic types are shown
in Tables 3, 6, and 7, and comparative data from sites found adjacent to the Park are provided in Tables 4, 5, 7 and 8. The latter sites are described in Appendix 1. These data, Map 2, and the Appendices (1-4) provide the basis for the discussion of prehistoric cultural history and use patterns which conclude Chapter 4.

Historic and prehistoric site impairment, values and recommendations for further work and interpretive programming are summarized and discussed in Chapter 5, which concludes the body of the report.

Appendix 1 discusses the prehistoric sites found adjacent to the Park, with particular emphasis on the Glacier Pass Quarry Complex, and the Athabasca River sites. Representative stone artifacts for these areas are illustrated in Plates 19, 20 and 21.

A detailed discussion of the projectile point types is presented in Appendix 2. This includes projectile points found in and adjacent to the Park and the Bried Collection projectile points found in the intermontane Athabasca Valley. The latter are illustrated on Plate 18. Lithic type associations of the projectile points is presented in Table 9.

Appendix 3 is an analysis of miscellaneous stone tools from the Bried Collection and are illustrated in Plate 15. These tool types were not recovered during the inventory, and are included to provide a better representation of the chipped stone tools found in the Park.

A discussion of lithic types present and the cultural implications of some types are discussed in Appendix 4. Their site distributions are provided in Tables 6, 7 and 8, allowing comparisons of inter and extra-Park sites.

A glossary of terms and definitions, Appendix 5, concludes the text; references cited, tables, maps and plates follow respectively,
ENVIRONMENTAL CONSIDERATIONS

The prehistoric peoples who frequented Jasper National Park were nomadic hunters. Their lifeways were closely tied to the seasonal movement and behaviour patterns of the ungulates upon which they subsisted, which in turn were controlled by factors such as vegetation patterns, climate and physiography. Some of these variables changed through time in response to different climatic conditions. These may have provided better or worse opportunities for prehistoric man. These variables also affected historic Native and European peoples.

The following chapter briefly describes the more salient characteristics of Jasper's environment which would affect historic and prehistoric use of the Park area.

PHYSIOGRAPHY AND SOILS

Jasper's mountainous topography is an important factor in understanding the land and resource use patterns of prehistoric man. The configuration of the valleys originally formed in pre-glacial times, and the nature of their floors, resulting from glacial action, controlled settlement locations, movement patterns, and subsistence strategies. The geological features and the history of late Pleistocene and Holocene glaciation are briefly reviewed in those areas of Jasper where prehistoric sites were found.

BEDROCK GEOLOGY

The Rocky Mountains and adjacent foothills originated during a period of uplift, folding and faulting, known as Laramide Orogeny, which began during mid-Tertiary times (Stene 1966:15). East to west, the
intensity of the folding, faulting, subsequent uplift and the age of the strata increases. These actions formed Main Ranges extending from the Jasper Townsite to the Continental Divide; (consisting of single thrust sheets of Pre-Cambrian and Cambrian sedimentary rocks), the Front Ranges from Jasper Townsite to the east gate (5 approximately parallel thrust sheets consisting of Devonian to Permian age sedimentary rocks), and the foothills, mainly comprised of thrust faulted and folded Cretaceous age sedimentary rocks (Roed 1968:30).

The Main and Front Ranges trend in a northwest to southeast direction. Each thrust fault in the front ranges is a separate parallel range. Their southwestern slopes are gentle and the east slopes or scarps sharp. Valleys have formed between the thrust faults where younger, less resistant, Mesozoic strata was eroded by a number of factors including chemical and glacial action. The more resistant Paleozoic limestones form the mountains.

The major feature of the Park is the Athabasca Valley. From its headwaters to the Yellowhead Corridor, the Athabasca Valley parallels the Continental Divide in a north-northwest direction. Changing to a northerly to northeasterly direction, the Athabasca Valley cuts obliquely through the ranges to exit into the foothills.

GLACIAL GEOLOGY

Glacial and post-glacial geological processes are primarily responsible for the form of the valley floors. The major glacial advances scoured and gouged the valley floors creating U-shaped valleys, depositing lateral moraines along their flanks and end moraines at their terminal fronts. During retreat the glaciers deposited their sediment load in the valley bottoms, forming ice contact terraces
along their edges and outwash plains in front. These were actively reworked by the glacial and post-glacial meltwaters.

In the Athabasca Valley below the Jasper Townsite, the Athabasca River is braided. It is confined between the valley sides and large lateral moraines or valley train deposits. Post glacial terraces are poorly developed. Upstream from Jasper Townsite the Athabasca River has actively downcut, reworking glacial and glacial-fluvial deposits into the present floodplain terrace. Two earlier river terraces lie above. Land forms in the Athabasca Valley outside the front ranges were mostly formed during still-stands of the Obed Glacier, 20,000 or more years ago. It deposited upper and lower valley trains preserved today as two distinctive terraces (Stene 1966).

In contrast to the Athabasca, the drainages in the Upper Snake Indian area in general are characterized by streams incised through till plains. These tills were deposited in the upper reaches of tributary valleys such as Rock, Deer and Blue creeks and in the Willow Creek region of the main valley. Subsequent stream and river action has reworked the morainal deposits into the present land forms.

Deer and Blue creeks have cut through outwash and moraine deposits to re-instate themselves as tributaries of the Snake Indian River. In contrast Mowitch and Rock Creek were post-glacially diverted to the Wildhay River drainage. Willow Creek likely follows the preglacial Rock Creek course. The Snake Indian River has cut through the till plain, forming two broad terraces above the present floodplain.

LATE PLEISTOCENE AND HOLOCENE GLACIATIONS

Geological events during the last 100,000 years or so are largely responsible for the landforms, valley floors and drainage systems that
exist today. Pleistocene studies in and adjacent to Jasper have been limited to aspects of the Athabasca Valley outside the Park (e.g. Mountjoy 1961, 1962; Roed, Mountjoy and Rutter 1967; Roed 1963; and Stene 1966). Both Roed and Stene defined ice advances in that area. Preliminary aerial photo interpretation indicates that a series of ice frontal locations, representing major advances, post dating those of Stene and Roed, lie in the valleys to the west.

An important influence in the glacial history of the Park was the movement of ice eastward across the continental divide. This ice, which originated from the western Cordilleran Ice Cap, augmented the flow from ice accumulation centers on the east side of the divide, resulting in more extensive and longer lasting ice advances in Jasper than in Rocky Mountain regions to the south (Roed 1963, Reeves 1973).

The earliest recognized advance, termed "Pre-Obed" by Stene (1966) or "Marlboro" by Roed (1968), probably correlates in age with the Late Bull Lake glaciation (dating ca 70,000-100,000 years ago), Rocky Mountain Sequence (Richmond 1970). Originating west of the Continental Divide, it moved through a number of passes, north of the Yellowhead Pass into the Smoky and Snake Indian Valleys, south of Yellowhead Pass into the upper Athabasca Valley; and particularly through the Yellowhead Pass into the Athabasca Valley. Ice from the Cordillera was augmented by that originating on the east slopes to form a glacier which flowed out beyond the front range forming a large piedmont glacier which coalesced with the continental ice sheet in the Edson area (Roed, Mountjoy, Rutter 1967; Roed 1968, Reeves 1973). After this event the glacier gradually retreated to the Brule Lake locality.

The second advance, which also incorporated ice from the western Cordillera, termed the Obed advance, flowed east of the Front Ranges
along the Athabasca Valley to a terminal position near the town of Obed. It probably correlates with the Pinedale I advance (Richmond 1970), elsewhere dating ca 22,000-15,000 B. P. Subsequently the glacier rapidly retreated to the Entrance area, where it remained for some time. During this still-stand, an upper valley train was deposited in the Entrance-Hinton area. The ice subsequently receded to another still-stand position near the east Park boundary, depositing the lower valley train (Stene 1966, Roed 1968). The glacier probably reached another still-stand in the De Smet Range vicinity. A valley terrace, especially marked on the west side of the Athabasca River, extends east from this point. It may be contiguous with the lower valley train terrace identified east of the Park boundary by Stene and Roed. Probably by this time western Cordilleran ice was no longer augmenting the eastern slope flows, except possibly in the Yellowhead Pass and the headwaters of the Athabasca and Sunwapta valleys. Subsequent glacial advances in valleys such as the Snake Indian and perhaps the Athabasca were not influenced by ice from the western Cordillera. These advances will correlate more closely with the Pinedale and Neoglacial Rocky Mountain sequence of Richmond (1970) and Reeves (1973). A Pinedale ice front which elsewhere dates ca 14,000 years ago may be present below the Jasper Townsite.

The earliest of late Pinedale advances, Pinedale III, dating approximately 11,000 years ago, terminated in the Athabasca Valley in two positions. Ice flowing down the Miette reached the vicinity of the Jasper Townsite and ice in the upper valley terminated in the vicinity of the Whirlpool-Athabasca Valley confluence. In the Snake Indian Valley it terminated in the vicinity of Shale Banks. The ice frontal positions occur at ca 1212 meters.
Pinedale IV, which reached its maximum extent around 8500 years ago, advanced to the vicinity of Sunwapta Falls in the Upper Athabasca Valley. In the Snake Indian Valley it approached the Deer-Blue Creek vicinity. Morainal elevations are around 1455 meters.

During the period from approximately 8000 to 5000 years ago, a world-wide climatic change took place. Known as the Atlantic or Altithermal climatic period, it was drier and warmer than at other times. Annual precipitation, winter snow fall, and cloud cover decreased. The cloud cover decrease resulted in increased mean annual temperatures. Chinooks would be more common in the Jasper area. These changed climatic conditions would result in the gradual altitudinal increase of the lower tree line and forest invasion of open meadows at higher elevations. Grassland associations in the valley bottom would expand and so would ungulate populations such as mule deer.

Following the Altithermal the climate became cooler and wetter. This change resulted in the first of the Neoglacial advances. Some 5000 years ago glaciers advanced to terminate in the vicinity of the Athabasca-Chaba River confluence and west of the Snake Indian River-Blue Creek confluence. After this time a number of minor glacial advances of short duration occurred. These were generally restricted to ice-source localities such as permanent ice in cirques and valley heads. They were accompanied by cooler climates. The last, most notable period of cooler climate and ice growth, known as the "Little Ice Age", occurred from about A.D. 1350 to 1850 (Stelfox 1968:205).

Cooler periods such as the "Little Ice Age" would likely be periods of increased snow fall and retention with prolonged winters. Boreal forest and tundra vegetation would be favoured as would hardy species such as wood bison, caribou, moose and ptarmigan (Stelfox 1971,
personal communication).

In summary, preliminary interpretation of the glacial sequence in the Park indicates that the Athabasca (Jasper Townsite east) and lower Snake Indian Valleys were ice free by at least 10,000 years ago. The Athabasca Valley, east of the Front Ranges, was probably ice free for more than 15,000 years.

SOILS

Few documented studies of soil classifications have been done in Jasper Park. Generally the soils in the valley floor are poorly developed. They occur in the thin capping of sands and silts on the glacial-fluvial terraces, and earlier morainal deposits.

Stringer (1968) noted that grassland soils in the Athabasca Valley were arid, regosolic and nutrient poor; characterized by wind erosion in some areas and the deposition of aeolian material in others. He suggests the strong valley winds, low elevation and rain shadow effect, combine to give the area a low precipitation/evaporation ratio. This coupled with the nutrient-poor, regosolic soils lead to a semi-desert type of grassland unable to tolerate grazing (Stringer 1968:56 ff).

In the Athbasca Valley, east from the Front Ranges, aeolian deposits derived from the Athbasca floodplain have formed the base for the development of a typical brunisolic grey wooded soil (Roed 1963:11 ff). In the Snake Indian-Willow Creek region, brown-wooded soils predominate in the meadows and at lower elevations. At the higher elevations, lithosols and deorcic regosols appear. Generally there is greater moisture retention in the Snake Indian drainage basin.
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CLIMATE

The Arctic Continental air masses frequently penetrate the Jasper area bringing cool to cold air during the winter, and cool moist air in the summer. When the Arctic meets the Maritime Pacific air mass snow, cold periods, rains and high winds result. Generally Jasper is characterized by long cold winters, with occasional Chinooks and short summers. The transitional seasons (spring and autumn) are short. The warmest month is July, with temperatures reaching a mean maximum of 23°C with a mean monthly average of 15.2°C. January is the coldest month with a mean maximum of -7°C and a mean monthly average of -10°C (Stringer 1966:25). However cold snaps, brought on by cold Arctic Continental air masses, can and do drive temperatures down to -40°C.

Jasper Townsite's average precipitation is 22.9 cm of rainfall, and 102.4 cm of snowfall, with a mean annual precipitation of 33.1 cm (Soper 1970:15). In contrast the mean annual precipitation at Entrance is 48.4 cm (Stene 1966:16). Mean average temperatures for the Entrance area are similar to those at Jasper Townsite.

The Park's local climates vary considerably. The lower Athabasca Valley, from the townsite to the Front Range, has a draughtier, warmer climate than up valley or in the valleys to the north and south. This distinctive climate results from the prevailing westerly winds which drop most of their moisture on the Continental Divide, entering the lower Athabasca Valley dry and adiabatically warmed. In winter these mild winds scour the lower Athabasca Valley of snow, at times creating true Chinook conditions within and outside the Front Range. The lower Athabasca Valley has higher mean annual temperatures than Banff (Stringer 1966:23 ff).

The Pacific Maritime air masses cause a wetter climate in the
north-south aligned valleys (e.g. Tonquin and Upper Snake Indian). Here
snow fall and retention is greater during the winter. Only the west and
south slopes are scoured by the wind. More frequent rains occur during
the summer months.

BIOPHYSICAL LIFE ZONES

Inherent to understanding prehistoric man's resource utilization
strategies in Jasper are the biophysical relationships within the moun­
tain regions. These determine which vegetational configurations occur
in relation to topography, elevation and climate; therefore structuring
the occurrence and seasonal patterns of ungulate species which were
exploited by prehistoric man.

Various biologists (including Kindle 1928, and Soper 1970) have
utilized the life zone scheme derived from Merriam (1899) and D. F.
Love (1970) consisting of the Arctic-Alpine (Alpine tundra), Hudsonian
(subalpine forest), Canadian (mixed forests) and transition zones. Due
to confusion arising from this and later life zone classification schemes
(Weaver and Clements 1938, D. F. Love 1970), there has been a shift
in recent years by biologists (Stelfox 1974) and archaeologists (Reeves
1972, Christensen 1971 and Elliott 1970-71) to use a sheme similar
to the European lifezone classification proposed by Love (1970). This
scheme, as applied herein, includes five vegetational zones (adapted
from Reeves 1972); the Planar, Colline, Montane, Subalpine and Alpine.
Within the confines of Jasper only three of these are present; the

ALPINE

The lower and upper limits of the Alpine zone depend on the variables
of slope angle, exposure, latitude and long-range climatic conditions.
Wind plays a major role. The lower limits range from 1818 to 2424 m, averaging ca 2000 m. The Alpine zone has the coldest and longest winter. In higher elevations snow retention occurs year round. Numerous glaciers occur in this zone. Commencing at the tree line of the Subalpine ecotone, vegetation consists of grassland meadows in the lower zones, changing to lichen with increasing elevation. The greater part of the Alpine zone is barren bedrock and scree slopes. The Alpine provides habitual summer ranges for caribou, sheep and mountain goats. Elk, usually bulls, occasionally range into the Alpine zone.

SUBALPINE

The Subalpine zone generally lies between 1363 and 2121 meters above sea level. Vegetation consists of a mosaic of open and semi-open grasslands, meadows and bogs. The areal majority is comprised of coniferous forest. At lower elevations, lodgepole pine (Pinus contorta) predominates. Lesser stands of white spruce (Picea glauca) and aspen poplar (Populus tremuloides) associate. With increasing elevation, Engelmann spruce (Picea engelmannii), white spruce hybrid complex and alpine fir (Abies lasiocarpa) become dominant. Above 2050 m only Engelmann spruce occurs. Here the trees are dwarfed, isolated or in groves or islands. The major elevated side valleys (Snake Indian, Brazeau, Maligne, Whirlpool, etc.) lie predominantly in the Subalpine zone. The Subalpine zone provides major summering areas for elk, and to a lesser extent mule deer. Probably it was the summering area for wood bison. Moose, caribou and mountain sheep occur less frequently in summer.

MONTANE

The Montane zone occurs below 1515 meters. Its upper aspects consist of stands of black spruce (Picea mariana), Douglas fir (Pseudotsuga
meziesii), white spruce (*Picea glauca*) and lodgepole pine (*Pinus contorta*). Stands of aspen poplar (*Populus tremuloides*) and balsam poplar (*Populus balsamifera*) occur. In the lower Athabasca Valley, the deciduous forest becomes more prevalent, and grasslands more extensive. This zone is important as a major winter range area for many of the ungulates: elk, deer, bison, mountain sheep and less frequently, caribou, moose and mountain goat.

**FAUNA**

Jasper's ungulates were of paramount importance for prehistoric peoples. They were the primary food source and in addition, provided numerous biproducts. The numbers and distribution of the species noted below would be affected by past climate and biotic life zones shifts.

**WOOD BISON (*Bison bison athabascae*)**

Bison were historically present in Jasper National Park. Bison crania and skeletal remains have been reported in the upper Athabasca Valley and Prairie de la Vache (Buffalo Prairie) by Hollister (1912); in the Brazeau Valley by Clarke (1942); and in the Snake Indian Valley by Elliott (1971). Historical records suggest wood bison were exterminated or disappeared from Jasper prior to 1850, possibly as early as 1825 (Soper 1970:72).

Wood bison likely inhabited much the same regions during winter and summer as do the present day elk populations. They probably wintered in the lower valleys (e.g., Athabasca) and summered at higher elevations up into the Alpine zone. Summering areas may have included the upper Snake Indian drainage, including Glacier Pass, and the Brazeau drainage.
ELK (*Cervus canadensis nelsoni*)

Elk were also a historic component of the ungulate population prior to their extermination around 1894 (Soper 1971:65). The latter resulted in part from a series of severe winters combined with intensive white hunting and Native dependence on elk for food (Soper 1971:65, Stelfox 1964:14, 15). In 1920 88 wapiti were transplanted in Jasper. These along with the remnant of the original Brazeau herd (5-14 animals in 1913) resulted in the present day population (Stelfox 1964:16, 17).

Most at home in a parkland (mixed aspen, shrubs and open grass), the elk is primarily a grazing animal requiring open grass areas. Within the confines of the Park the elk range from above timberline in summer to the floors of the major valleys during the winter. The greater part of the year is spent in the Montane zone. The seasonal migrations may be up to 64 km in length from high intermontane summering locals to wintering ranges east of the Front Ranges.

WOODLAND CARIBOU (*Rangifer tarandus caribou*)

Woodland caribou were noted in Jasper by explorers and travellers in the early 1800's. At present they are rare within the Park's confines (Sopher 1971:71). The woodland caribou's habitat is extensive, ranging from the montane through the Subalpine into the Alpine zone. During the winter, the caribou move to lower elevations (Soper 1971:71).

The woodland caribou is ideally suited to the Boreal Forest-tundra plant communities (*e.g.* lichen, mosses, low shrubs) and cold, deep snow environments which characterize much of the Park. In earlier times they would have probably been quite common. Hector (Spry 1963) notes their presence in the Athabasca Valley in 1859.
MOOSE (*Alces alces andersoni*)

Moose are found in most regions of the Park. Today they rank fourth in population. During the latter half of the 19th century and the early 1900's, the moose population went through a steady decline (Soper 1971:69).

Moose are generally adapted to the Montane zone, preferring wetland habitats found near streams, lakes, swamps and muskegs. Here the moose will often be found during the summer months feeding on sub-aquatic plants. They will also range, however, into the Subalpine in summer. Occasionally they have been observed in the Alpine zone at elevations up to 2287 meters (Soper 1971:69, 70). Moose are extremely well adapted to cold and will winter at higher elevations in the Continental Divide area utilizing alpine fir for forage if more desirable forage is scarce (Clarke 1942).

MULE DEER (*Odocoileus hemionius hemionius*)

Mule deer are relatively abundant within the confines of Jasper. As with bison, elk and moose, mule deer were evidently present in large numbers in the early 19th century but went through a drastic decline due to increased hunting pressures, disease and severe winters. By 1896, mule deer were scarce in the Jasper Park area (Soper 1970:67).

Mule deer compete for much the same habitat as elk. In the winter months mule deer are found in the lower main valleys (e.g. Athabasca). With the coming of spring, they move gradually into the Subalpine zone. Summer will find the deer scattered throughout the Montane/Subalpine zones and at times up into the Alpine.

BIGHORN SHEEP (*Ovis canadensis canadensis*)

Bighorn sheep, according to numerous early explorers and residents, never occurred west of the main divide in the Jasper region (Soper 1970:74,
Stelfox 1968:6). They were largely confined to the two eastern ranges. Early explorers invariably commented on the abundance of Bighorn sheep in most regions of the Park. Apparently they suffered less extensive population declines during the mid-19th century compared to the drastic declines attributed to elk, moose, bison and deer populations, resulting from disease and severe winters (Stelfox 1968:8). In the mid-19th century Bighorn sheep were, at times, the only available ungulates in the lower Athabasca Valley.

The bighorn sheep habitat is restricted to open grassy areas, particularly on slopes with south or southwest exposures. Areas frequented include Alpine meadows and Subalpine grass covered slopes and regenerated avalanche and burn areas where tree growth is limited. The greater part of the year is spent at higher elevations in the Alpine and upper Subalpine zones. Specific wintering ranges occur in the Subalpine or Montane zone (e.g. Athabasca Valley) where exposure and wind (Chinooks) reduce snow cover. For the most part, rams and ewes are separated in exclusive bands; usually congregating in the fall to mate. Bighorn sheep habitually frequent mineral and/or salt licks which may occur some distance from their preferred habitat.

OTHER SPECIES

A variety of other animals present in the park were utilized by man. These include fur-bearers such as black bear, lynx, beaver, martin and the like; and hares, porcupines, marmots, and ground squirrels. Upland game, e.g. blue grouse and ptarmigan, would also be hunted; as would migratory and nesting waterfowl. Native trout and whitefish might also have been taken.
SUMMARY

The preceding chapter has briefly discussed various environmental characteristics of the Jasper area; the Park's geology and glacial history which gives it its distinctive configuration and the soils and climate which in part reflect its physiography. These combine to distribute the various life zones and the ungulates upon which the Native peoples subsisted. As will be discussed later, it is the seasonal distribution and abundance of these ungulate resources which structured past Native peoples' utilization of the Park; where and at what seasons they settled; their population and group size, both historically and in the prehistoric past.
HISTORIC SITES AND PEOPLES

Historic site location was not part of the archaeological inventory's original terms of reference. However, as requests were made at various times, by both the National Historic Parks Branch and the Jasper-Yellowhead Historical Society, for the field party to attempt to locate some of the known fur posts, historic cabin remains and isolated structures; historic sites when found were recorded. This activity resulted in the recording of eighteen sites (Table 1, Map 1), relating to Euro Canadian, Metis and Native utilization of the Park over the last 150 years. These sites, which represent a sample of such sites still extant in the Park, consist of three sites relating to the fur trade (Pl. 1), seven cabin remains of Metis-Euro Canadian peoples (Pl. 2), and eight sites in the Upper Snake Indian representing Metis' trapping camps and burials (Pl. 3). In the following chapter the sites are first described followed by a brief resume of Euro Canadian and Native history applicable to Jasper National Park.

HISTORIC SITES

The historic sites discussed in this section are arranged by Borden Site Designation Number (see Glossary), beginning with the Athabasca Valley (pp. 25-32), followed by the Snake Indian Valley (pp. 32-36). Each site's location is given, the site described, and a brief recommendation presented for future management if warranted. More general recommendations are discussed in Chapter 5. Summary data is provided in Table 1, and site locations shown on Map 1. Two sites, FgQm-2 and FgQm-6, have historic and prehistoric components. The latter are described in Chapter 4.
ATHABASCA VALLEY

**FeQl-1 (Pl. 2B)**

**Location:** FeQl-1, consisting of burned cabin remains, is located 14.4 km south of Jasper Townsite on the Banff-Jasper Highway, approximately .4 km west of a barrow pit adjacent to the highway.

**Description:** Ian Coates (Jasper-Yellowhead Historical Society) directed the survey crew to the site in 1971. It is situated on an alluvial filled river terrace, 10 m above the Athabasca River. Open Jack pine forest covers the area.

The cabin is situated 5-8 m from the terrace edge. Today it is discernible only by wall outlines and a chimney mound. It was a single room cabin with dimensions of 4.7 m (N/S) by 7.5 m (E/W). The chimney mound occupies the west wall. The cabin was extensively burned. It is now covered by 5-10 cm of silt and vegetation growth.

Associated artifacts include porcelain fragments, clay pipe fragments, square nails and clay chinking; and small burned ungulate bone fragments. The structure probably dates from the latter half of the 19th century, and was associated with fur trade activities of that period.

**Recommendation:** Site value is unknown. Some vandalism has occurred. Testing and mapping is recommended to establish the age and historic association of the structure.

**FfQm-1 (Pl. 1A)**

**Location:** FfQm-1, Laroque's or the last Henry House, is located on Cottonwood Flats adjacent to the railway trestle over the east exit from the town of Jasper.

**Description:** Cottonwood Flats is a large grass-covered
meadow surrounded by mixed coniferous and deciduous growth. In the early part of the 20th century the Milner Dairy was located here and associated building foundations are still visible.

Archaeological testing in 1970 of a small rectangular depression adjacent to the Jasper exit road, revealed historic artifacts; wire, a clay pipe stem fragment, and butchered faunal remains. The faunal remains include large and small ungulate fragments, a large bird scapulae (possibly Canada Goose) and a porcupine incisor. This may be the site of the last Henry House or Laroque's house, constructed by Laroque for the Hudson Bay Company in 1824.

**Recommendation:** The site is potentially of considerable historic value. Extensive excavations are required to determine the age and nature of the various pits and foundation outlines, and to separate those belonging to the earlier use of the area. The first Henry camp and first Henry house were probably destroyed by the Jasper Park Lodge development. Therefore, this site may be the earliest historic site remaining in the Park.

**FfQm-7 (Pl. 2A)**

**Location:** FfQm-7, the John Moberly home, is located on the east side of the Athabasca River adjacent to Garonne Creek.

**Description:** The site area is an open, grass-covered alluvial fan truncated by the Athabasca River to form the present floodplain terrace. Open mixed deciduous and coniferous forests bound the meadow. Situated in the meadow are three log structures which were the home of John Moberly and family. John Moberly was the son of Henry John Moberly, Factor at Jasper House during 1858-1861. The Moberlys never filed a homestead application. Therefore, with the creation of Jasper
Park in 1907 they were viewed as squatters and forced to vacate. In settlement for his squatter's claim, John Moberly received $900.00 in March 1910.

**Recommendation:** John Moberly's residence is one of the two earliest still standing structures in the Park, and is therefore of value. The house is still in good condition and we recommend it be renovated and the two outbuildings reconstructed. Gordon Bried apparently collected two prehistoric artifacts from the meadow; a uniface and a quartzite biface. We recommend limited testing of the meadow to determine if a prehistoric site is present.

**FfQm-10**

FfQm-10, the Athabasca Depot of Walter Moberly (CPR surveyor, 1871-1872), is located adjacent to the Athabasca River, 6.24 km north of Jasper Townsite on Highway 16 (east).

**Description:** Situated on the west bank of the Athabasca River the site is just downstream from the mouth of the Maligne River. Butchered bone fragments, lead foil, chinking fragments, a Henry 44 caliber short cartridge casing and glass (bottle) fragments were found. The site was largely destroyed by clay barrow pitting for the construction of the Trans Mountain pipeline.

**Recommendation:** None, the site is of no further value.

**FgQm-2**

**Location:** FgQm-2 is a cabin site possibly relating to railway construction. It is located approximately 1.5 km south of the Snaring River Campground and .5 km east along the southern edge of a small lake.
Description: The site is situated on stabilized sand dunes, 10 meters above a river margin lake. The cabin's perimeter is 14 m (E/W) by 9 m (N/S). It consisted of two rooms. Associated artifacts include bottle glass, a leather fragment, a round spike and a tin lid. The cabin is possibly related to the railroad construction activities in the early 1900's.

Recommendation: The site is of unknown value. Testing to determine the historic association and age of the cabin is recommended.

FgQm-4

Location: FgQm-4, Ewan Moberly's residence, is located north along the Celestine Road from the Snaring River, adjacent to and including the grave of Susan Cardinal (wife of H. J. Moberly, mother of Ewan).

Description: The site is situated on a floodplain terrace which has open meadows surrounded with mixed coniferous and deciduous growth. It is comprised of the log buildings and adjacent areas of Ewan Moberly squatter's claim, and includes his mother's grave. The area was settled by Ewan Moberly in the late 19th century and expropriated following the creation of Jasper National Park in 1907. Ewan Moberly received $1,670.00 in 1911 in payment for relinquishing his squatter's claim. Associated artifacts include bottle glass fragments, lead strip, tin cans and butchered faunal remains.

Recommendation: Ewan Moberly's residence is one of the two earliest standing structures in the Park. It should be renovated and preserved as a historic site.

FgQm-6

Location: FgQm-6, the remains of Adam Joachim's residence
(brother-in-law to John and Ewan Moberly), is located across the Celestine Lake Road from the Snaring River Warden's Station. The historic remains are located east of the main prehistoric site area (see Chapter 4) within the trees adjacent to Jasper Lake.

**Description:** The site is situated on an alluvial fan terraced by riverine and lake action. The surface of the site is 3-4 m above the lake waters. Mixed deciduous and coniferous growth cover the area. The outline of a burnt log structure was located in a small clearing. The logs were double notched and the structure was presumably a one-room cabin. Associated artifacts include pieces of iron, china fragments, bottle glass and burned faunal remains. The cabin and adjacent land were the squatter's claim of Adam Joachim. Adam Joachim received $1,125.00 in payment for relinquishing his squatter's claim in March 1910.

**Recommendation:** The site dates to the same period as John and Ewan Moberly's residences. While its primary values are destroyed, it could be excavated to recover a sample of artifacts and other data from the time period. These could be used for interpretive development. A marker or sign could be placed adjacent to the Snaring Warden's Station giving a brief history of Adam Joachim.

**FgQm-9**

**Location:** FgQm-9 is a collapsed cabin site located on the south side of the Snaring River approximately 225 m downstream from the Snaring River Campground.

**Description:** The site is situated on the floodplain located approximately 100 m south of the Snaring River. There is a silt/sand covering over river cobbles/gravels, with mixed coniferous and deciduous growth scattered throughout the area.
A one-room cabin site with only the foundation outline visible was located in a small clearing. The dimensions are 4.5 m x 4.5 m. The floor was lower than the surrounding ground surface, presumably the result of piling earth along the walls as insulation. Located approximately 65 m south-southeast of the cabin is a rectangular depression of 1.9 m by .8 m, on a north-south longitudinal axis. Sawed boards, poles and debris fill the depression and a mound of the excavated gravel is situated along the eastern edge of the pit. The depression may be a grave, however the sawed lumber and poles and the lack of fill suggests that it served a different function.

The cabin and the depression are probably related. The cabin likely served as a winter trapping camp, as it appears to have been winterized. It probably dates in the late 1890's or early 1900's.

Recommendation: The site is of unknown value. Testing is recommended to determine the nature of the depression and historical association and age of the cabin.

FgQm-10 (Pl. 3B)

Location: FgQm-10 is a partially collapsed log crib located approximately .6 km north of the Snaring River Warden's Station, adjacent to Corral Creek.

Description: The site is situated on a stream terrace enclosed in a canyon from which Corral Creek exits into the flats adjacent to the Snaring River Warden's Station. The vegetation consists of larch, spruce, grass and mixed deciduous growth.

The site is comprised of an axe-notched log structure, rectangular in shape, with dimensions of 3.1 m by 1.1 m by .8 m (decay and partial collapse have reduced the overall height of the structure).
The long axis is oriented east-west. The remains of a floor lie within the structure. This structure and others in Jasper functioned either as crib burials or caches. No skeletal remains were visible. The structure is probably late 19th or early 20th century and is either of Metis or Indian construction.

**Recommendation:** The site is of value and potentially sacred. It could be subjected to vandalism if discovered by visitors. Mapping and limited testing of the crib to determine its function is recommended.

*FgQ1-1 (Pl. 1B)*

**Location:** FgQ1-1, the site of the second Jasper House, is located on the west side of the Athabasca River approximately 1 km upstream from the Snake Indian-Athabasca River junction.

**Description:** The site is situated on the floodplain terrace approximately 1.5 m above the Athabasca River. The site area is open, grass covered and bounded on three sides by mixed spruce and willow.

It is the location of the second Jasper House, established by the Hudson Bay Company around 1829. It was abandoned in 1885. Visible surface remains include chimney mounds of two or possibly three structures, four adjacent pits and a cemetery, in the southwest corner of the clearing; with 20 discernible graves.

The last remaining building was shortened by a homesteader named Swift around 1892, who briefly lived on the site. It was torn down by a party of Pacific Grand Trunk surveyors under the charge of a Mr. Stevens in January of 1910.

A layer of burned and butchered bone fragments and the occasional stone flake was found in the river cutbank at a depth of 9-15 cm below surface. This may be a contemporaneous Metis or Native
occupation or an earlier prehistoric occupation.

Recommendation: Jasper House is a historic site of regional if not National value. The site has not yet been touched by vandals and before this happens, a major excavation/possible reconstruction program is recommended. The site is of focal importance to Jasper's history.

FgQl-2

Location: FgQl-2, a cabin remains site, is located on Devona Flats, approximately 1 km north-northwest of the Devona Warden Station.

Description: The site is situated on the floodplain terrace of the Snake Indian River after it enters the Athabasca Valley. The site area is open, grass covered with scattered spruce growth.

Cabin remains consist of a chimney mound (2 x 2.3 x .5 m), and four associated pits or depressions. Two of the pits are oval in shape (3 x 2.7m and the second, 1 m in diameter), and two are rectangular in shape (4.5 x 2.4 m and 1.8 x 1.0 m). No wall or foundation outlines were visible as deposition and grass cover the mounds and depressions, suggesting considerable antiquity.

Recommendation: The site is of unknown value. Testing is recommended to ascertain age and historical association. It could be related to Jasper House.

SNAKE INDIAN-WILLOW CREEK

FiQn-1

Location: FiQn-1, consisting of trapping houses and tipi frames, is located on an abandoned horse trail which runs northeast from the present Wolf Creek Trail to Wolf Creek.
Description: Trapping cubby houses and collapsed tipi poles are scattered along the old horse trail. The site is situated on an alluvial fan of Wolf Creek. It is covered with dense spruce forest. Decayed axe-cut tree stumps are found throughout the area. The tipi frames and cubby houses are badly rotted. It probably was a Metis winter trapping camp dating to the late 19th century.

Recommendation: Structural remains are poorly preserved and the site is of no particular value.

FiQo-2

Location: FiQo-2, a log crib, is located on the east side of Willow Creek approximately 100 m north of the Willow Creek Warden's Station Trail, where the trail leaves the large meadows adjacent to the Willow Creek-Snake Indian River junction.

Description: An axe-notched log crib is situated on a lower valley terrace which is covered by mixed coniferous growth. The crib is oriented north-south with dimensions of 2.24 m x 0.8 m. The walls were constructed of saddle notched logs uniformly 6-8" in diameter, and at least 3 logs high. No associated artifacts were found and no evidence of remains within the crib were noted. The collapsed roof did not allow a clear view of the interior. The crib is likely of Metis origin and may date to the late 19th century.

Recommendation: The site is of value, and potentially sacred. Mapping and testing to determine the function of the crib is required, followed by searches to determine the identity of the deceased if present.

FiQo-5

Location: FiQo-5, a crib burial, is located approximately 3 km west along the Rock Creek trail from its junction with the Willow
Creek-Blue Creek Trail. From the trail the site is approximately .3 km north on the east side of Mud Creek.

**Description:** The site consists of a small depression, with the remains of a pole crib in and around the depression. Situated on a grass covered terrace, the grave has a southerly exposure overlooking a meadow (known locally as Indian Grave Meadows). The depression is ill-defined. The grave orientation and dimensions could not be accurately determined. The grave appears to have been subsurface with a pole crib constructed over top. The grave is either of Metis or Indian origin and probably dates from the latter half of the 19th century.

**Recommendation:** The site is of value and potentially sacred. Limited testing to determine if it is a burial should be done, plus positive identification of the remains. The site should be left intact.

**FiQo-11**

**Location:** FiQo-11, a crib burial, is located approximately .3 km northeast of the Rock Lake-Wolf Trail junction on the Wolf Creek Trail.

**Description:** A subsurface burial with a collapsed decorated crib is situated on a floodplain terrace adjacent to Wolf Creek. The terrace is covered with grass and open spruce growth. The burial has a north-south orientation with dimensions of 2.6 m by 1.0 m.

The crib consisted of corner posts (2.0 m x 11 cm x 11 cm) with carved diamond-shaped tops and pickets (1.7 m x 11 cm x 4 cm) which have diamond-shaped tops as well. The diamond motif is similar to some of the designs on pickets of the crib burials located near Entrance Provincial Park (FiQk-3). The majority of these burials are post 1910 and FiQo-11 may well be from the same temporal period.
Recommendation: The site is of value and sacred. The identity of the deceased should be determined and the site left untouched.

FiQo-20

Location: FiQo-20, two log cribs, is located adjacent to the Willow Creek-Blue Creek Trail approximately .8 km west of the Rock Creek Trail junction.

Description: Two axe-notched constructed cribs are situated on the lower valley terrace approximately 30 m back from the terrace edge. Both of the cribs are in a collapsed state but do appear to have been of identical construction. The cribs are oriented north-south, with the walls being constructed of 20 cm diameter saddle notched logs. The dimensions of "crib" A are 2.5 m x an indeterminable width, and the dimensions of "crib" B are 2.6 m x 1.1 m. The cribs were apparently roofed with split logs.

No skeletal remains were evident, however, the interiors of the cribs were obscured by the collapsed stakes and earth fill. The cribs likely date from the late 1890's to the turn of the century, and are of either Metis or Indian construction.

Recommendation: The sites are of value and sacred. Identity of the deceased should be sought and the site left intact.

FiQo-25 (Pl. 3A)

Location: FiQo-25, a tipi frame, is located adjacent to the Willow Creek-Blue Creek Trail, approximately 1.5 km east of Mud Creek.

Description: A standing tipi is situated approximately 10 m back from the edge of the lower valley terrace. The terrace is covered with spruce forest. The tipi is constructed of split logs laid over
top of a pole frame. The frame utilizes a forked pole as the base for the initial tripod construction. The split logs are fastened to the frame with round nails. The structure is approximately 5 m in diameter and approximately 3-3.2 m in height.

There are rotted axe-cut tree stumps in the immediate vicinity. This tipi was likely a Metis winter trapping quarters or line "cabin" used in the early 20th century.

**Recommendation:** The site relates to Native use of the Park. It will eventually collapse. Mapping and detail recording is recommended.

**FiQo-26**

**Location:** FiQo-26, a tipi frame site, is located on the northern end of "Indian Grave Meadows", approximately .75 km north of the Rock Creek-Willow Creek Warden's Station Trail junction.

**Description:** One standing and one collapsed split log tipi are situated on a drumlinoid ridge on the till plain surface. Boreal forest covers the area. Both tipis are apparently of the same construction as the tipi at FiQo-25 (i.e. the use of a forked pole as the base of the tripod and poles). The frame is covered with split logs. The standing tipi was 4 m in diameter and approximately 2.5 m in height.

These tipis could constitute a winter trapping camp or possibly served as line "cabins" along with the tipi at FiQo-25. There is little doubt that the same person or persons constructed the three tipis. The inhabitants of these structures may have been a Metis family. The structures were likely built after 1907.

**Recommendation:** The site relates to Native use of the area. The tipi will eventually collapse. Mapping and recording is recommended.
HISTORIC PEOPLES

People who frequented and lived in the Park during the 19th century consisted mainly of explorers, travellers, fur traders, Native peoples and their mixed blood descendants, the Metis. Their history is represented today by the historic sites described in the preceding section -- fur trade sites such as the last Henry House (FfQm-1), the 2nd Jasper House (FgQl-1), the residences of the Moberly brothers (FfQm-7, FgQm-4), and various Metis trapping camps and crib burials.

Jasper's history largely centers around the Athabasca Valley's role during the fur trade era. Although complex and confused, it is briefly outlined below with particular emphasis on the historic sites which were previously documented in this chapter. A discussion of the Native peoples conclude the chapter.

FUR TRADE AND SETTLEMENT

History begins in the Athabasca Valley with the arrival of David Thompson in the winter of 1810-1811 and his crossing of the Athabasca Pass. It and the Yellowhead were probably crossed earlier by Iroquois trappers, traders or freeman. Thompson, then in the employ of the Northwest Company, travelled overland from the Rocky Mountain House on the North Saskatchewan, arriving on the Athabasca in December 1810. On January 6, 1811 he departed from the Athabasca Pass leaving behind one William Henry in charge of the horses. Henry established a temporary tent camp on the east side of the Athabasca River opposite the mouth of the Miette River. Thompson returned to Henry's camp in May 1811 to obtain goods and provisions (Glover 1962:28 ff).

In October, 1812 Thompson returned to find that Henry had constructed a house (the first Henry House) two degrees further north than the
previous camp (Coues 1897:642, 789). The first Henry House, situated in the vicinity of Lac Beauvert on the east bank of the Athabasca, was probably destroyed by the Jasper Park Lodge development. With this last crossing of the Athabasca Pass, Thompson established the Columbia Trade Route.

The first Jasper House was established by the Northwest Company around 1813 on the northeast end of Brule Lake. It functioned as a provisions depot for the fur brigades. Some seasonal trading with local Natives took place. This house was occupied until around 1829 when it was abandoned in favour of a location further upstream -- the second Jasper House. (The first Jasper House was probably located in the Solomon Creek/Brule Lake confluence, and was probably destroyed by railroad construction).

There is some controversy over the date of the establishment of the first Jasper House. Elliot Coues (1897:640, 759) considered the first Jasper House to have been erected around 1800. If such was the case it should have been recorded by Thompson in his journals as it was a Northwest Company House. Thompson makes no mention of such a structure. Thompson did note a cabin/hut on an island towards the south end of Brule Lake. This may have been the structure in which one Duncan McDougall supposedly wintered in 1802-03 (Coues 1897).

The Athabasca Pass and the posts mentioned above were under the Northwest Company's control until 1821 when amalgamation with the Hudson Bay Company occurred. After taking control of Jasper House, the Company built a post opposite the first Henry House. This house, variously known as the second Henry House, Laroque's House or Miette House (FfQm-1), was built in the fall of 1829 by J. F. Laroque, a chief Factor with the Company. The Hudson Bay Company officially discontinued
the use of Laroque's House by 1829-30. It was abandoned around 1835. During its last years it was seasonally used by hunters or winterers such as Miette.

In 1829-1830, Cline, then Factor at the first Jasper House, abandoned it and constructed the second Jasper House (FgQl-1) in a clearing on the north bank of the Athabasca River above the Rocky River confluence. The second Jasper House became the seasonal trading center for the Upper Athabasca and depot for the mountain crossings. It was finally abandoned in 1884.

The Jasper and Henry Houses existed primarily to facilitate the movement of the fur brigades across the mountains, first through the Athabasca Pass and later, around 1824, also through the Yellowhead or Leather Pass (Thompson 1960:16). They supplied horses and provisions to the incoming and outgoing brigades and parties. By the 1840's fur trade activity in the Jasper Park region had declined to the point that Jasper House was abandoned for one year. It was then re-established by H. J. Moberly (Moberly & Cameron 1929:94-95). From this time its operation was sporadic. The House's main function was to supply the local Iroquois and Metis with ammunition and goods.

During 1871-72, one Walter Moberly, who was in charge of a survey party engaged in surveying a possible line through the Yellowhead Pass for the Canadian Pacific Railway, established a supply depot (FfQm-10) on the west bank of the Athabasca opposite the mouth of the Maligne River (Thompson 1960:24). The results of Moberly's survey were not acted upon until the early 1900's when construction of the Grand Trunk Pacific Railway line was undertaken. In 1915, two years following the completion of the Grand Trunk Line, the Canadian Northern Railway line was completed. Two sites, FfQm-2 and FgQm-9, might relate to these
activities.

During the period following the abandonment of the second Jasper House in 1884, attempts were made to settle the Athabasca Valley. First mentioned is L. J. Swift who entered the Valley in 1892, briefly occupying the abandoned Jasper House. Swift moved up the valley to the Pallisades. Here he filed an application for homestead on 158 acres.

Numerous squatters settled on various tracts of land in the valley, three of these being the two sons (John and Ewan) and daughter (wife of Adam Joachim) of H. J. Moberly. H. J. Moberly, during his term as Factor at Jasper House, had married a Metis, Susan Cardinal. John Moberly and family settled on the east side of the Athabasca River on Garrone Creek (FfQm-7), Ewan and family settled on Moberly Flats just south of the Snaring Warden Station (FgQm-4), and Adam Joachim settled immediately east of the Station (FgQm-6). By 1910, the Moberly families and all other settlers had been evicted from the Park, except L. J. Swift. Swift was the only one who had filed for and received a homestead.

Metis and Indian trappers were active in the region, particularly in the Snake Indian Valley, both before and after creation of the Park. Crib burials, graves and tipi frame sites found in the area relate to their activities.

NATIVE PEOPLES

A variety of ethnic groups of Native people are mentioned in the historical record for the Jasper area. These included groups such as the Shuswap from west of the mountains, the Stoney, Iroquois and various Athapascan speakers -- Sekani, Beaver and Sarci. Cree and Metis people were also present. Many of these groups entered the region during
historic times, either accompanying the fur traders, e.g. Iroquois, or moving in front of it, e.g. Cree and Stoney. These intrusive groups displaced the traditional occupants of the western forests, the Athapascans, from their homelands on the eastern slopes, and by a domino effect, the Shuswap from their traditional lands in the Columbia Lakes.

Groups known as the Snaring Indians (Spry 1963) and the Snake Indians (Moberly and Cameron 1929) are mentioned in the literature. The Snakes were supposedly exterminated by the Assiniboines. These two groups are not documented elsewhere in the published literature. They may either have been a legendary or mythical group, or an alternate name for one of the known groups.

These Native peoples and their subsistence and settlement patterns are briefly described in the following sections. The Athapascans were probably the Native peoples of the area prior to the fur trade.

ATHAPASCAN PEOPLES

A number of Athapascan groups, likely various bands of the Beaver Indians, inhabited the areas adjacent to Jasper on the north side of the Yellowhead-Athabasca River corridor. One band, the Sarci, were south of the Athabasca River, along the Front Range, hunting as far south as the Red Deer River.

The Sekani, a breakaway band of the Beaver Indians, occupied the territory east of the Great Divide, and generally the territories south and west of the Beaver, who lived in the Peace River area. Two distinct bands, the Meadow Indians and Bawcanne Indians (Lamb 1960:221, Jenness 1937:4, 19) were identified by Fraser. They occupied the headwaters of the Smoky River and adjacent valleys to the north. Both of these groups disappeared in later times, possibly absorbed by the Sekani.
The Sekani were at enmity with the Beaver (Morice 1906:30). With increased pressure by the Cree and Beaver, armed with guns, the Sekani were forced into the mountains and across the Divide. Here they competed with the Shuswap for the headwaters of the Fraser River. The Shuswap eventually forced them further north (Teit 1909:545ff, Jenness 1937:11).

The Sekani, Meadow and Bawcanne consisted of small wandering bands.

"Indeed the Sekanis, who are quite nomadic and without horses, or villages, were formerly destitute of chiefs, but kept wandering in quest of game under the nominal leadership of the older heads of related families." (Morice 1906:5)

The greater part of each year was spent in small band or family units. Subsistence was largely based on hunting ungulates. The environment in which they lived did not support large numbers of bison, caribou or bighorn sheep which could effectively be exploited by collective techniques, and much of the terrain did not lend itself to employment of traps or pounds. Meadow Indian hunting strategies were recorded by Simon Fraser.

"....we were greatly amused looking at some of the Indians running after the wild sheep, which they call as-pah....... they are really expert; indeed, running full speed among the perpendicular rocks...., for the rocks appeared to us which might be exaggerated a little from the distance, to be steep as a wall and yet while in pursuit of the sheep, they bounded from one rock to another with the swiftness of a roe, and at least killed two in their snares." (Lamb 1960:189).

The Sekani in hunting and fishing relied less on their weapons than on dead falls, snares and nets (Jenness 1937:39). Fishing, snaring or trapping small mammals, e.g. marmot, beaver, rabbit; and the seasonal gathering of berries and other plants supplemented the large ungulates.

STONEY INDIANS

The Stoney Indians arrived in the Jasper Park region as a result
of the westward expansion of the Cree and the fur trade. The Stoney Indians, also known as the Swampy Ground Assiniboine (Coues 1897:523), People of the Forest (De Smet 1847) or Strongwood Assiniboine (Anderson 1867:map), reached the foothills area between the Athabasca and North Saskatchewan Rivers shortly before 1800.

During Cline's terms as factor (1824-25 and 1829-34) at the Jasper Houses, the Stoneys regularly travelled to Jasper from the Kootenay Plains on the North Saskatchewan. The trail, known as Cline's Trail, was via the Cline, Brazeau and Rocky Rivers.

By 1840-50, the band of Stoneys known as People of the Forest lived in the area.

"...do not number more than 50 lodges divided into several bands, travel over the mountains and through the woods over the different forks and branches of the sources of the Saskatchewan and Athabasca Rivers." (Chittenden and Richardson 1905:508f)

They subsisted --

"exclusively on small animals such as bighorns, goats, bucks, but especially on the porcupine." (Chittenden and Richardson 1905:509)

By the late 1840s, the Stoneys had moved further south along the Front Ranges in pursuit of better hunting grounds. Game was by then becoming increasingly scarce on the Athabasca.

THE SHUSWAP

The Shuswap arrived also as a result of displacement. Historical accounts (Coues 1897) suggest the Kootenai Indians, upon being pushed westward across the Rocky Mountains from their traditional eastern slopes home, displaced the traditional Shuswap occupants of the Columbia Lakes area to the west and north. By the 1830s, a group of Shuswap, known as the Rocky Mountain Shuswap, had a territorial range encompassing a broad, intermontane area from the headwaters of the
Thompson and Fraser Rivers, to the Yellowhead, Athbasca Valley and north into the Smoky River Valley (Teit 1909).

The Shuswaps were mobile and far ranging. In 1846 Kane met and identified a band of Shuswap under a chief known as "Capote Blanc" at the second Jasper House. On his return trip nearly a year later, Kane met Capote Blanc with two of his band at Boat Encampment on the Columbia, 140 km southwest of Jasper. They had come over from Jasper House to hunt moose and beaver (Kane 1859: 106, 235). Anderson's map, compiled between 1835 and 1850, shows Capote Blanc's 1836 winter camp located south of Tete Jaune Cache (Anderson 1867, Map).

The Rocky Mountain Shuswap were nomadic. They lived in small, highly mobile bands whose subsistence strategies incorporated a wide range of terrain. They exploited a variety of food sources including deer, elk, caribou, bison, moose, sheep, marmot, rabbit, beaver, squirrel, porcupine, bear, geese, ducks and fish. The latter included salmon, sturgeon, pike, whitefish and trout (Teit 1909:513). Most big game was hunted individually. Collective hunts were the exception. Snares as well as the bow and arrow were used to hunt the larger ungulates (Teit 1909:523).

Because of the continuous contact with the second Jasper House, the Rocky Mountain Shuswap intermarried with the Iroquois, Cree and Metis associated with the Jasper fur trade (Teit 1909:454 ff).

IROquoIS, CREE AND METIS

These people were inextricably tied to the fur trade in the Jasper Park region. Iroquoi freemen hunted and trapped in the Athabasca, Yellowhead and Upper Fraser Valleys prior to the establishment of the first Jasper House. During the winter of 1810-1811 Thompson noted a deserted
cabin on an island in Brule Lake. It may have been built by some
Halfbreed or Indian hunter (Glover 1962:xcvii). Thompson was guided
by an Iroquois on his journey over Athabasca Pass.

At the first Jasper House the staff included Jasper Hawse, two
Canadians (likely Metis or French), two Iroquois and three hunters
(probably Indian, Metis or Cree) (Cox 1830:254). Iroquois freemen and
hunters are also mentioned numerous times in the records. During the
latter half of the 19th century, the Iroquois and to a lesser extent
the Cree, intermarried with the Europeans and Shuswap to form a group
indigenous to the Upper Fraser and Athabasca Valleys. Henry John Moberly,
during his term at the second Jasper House, had an Iroquois-Metis wife.
Their offspring became one of the dominant Metis families in Jasper.

The Iroquois-Metis-Cree were drawn to the Athabasca Valley to trade
at the second Jasper House, for their favoured hunting areas did not
include the Athabasca Valley. The Smoky River Valley, the Foothills
east of the Front Ranges and the headwaters of the Fraser River appear
to have been the favoured locales for the Iroquois-Cree-Metis families

SUMMARY

The majority of Native people noted in the preceding discussion
moved into the Jasper area during the fur trade era. These and the
original inhabitants, most certainly some Athabascan group, seasonally
visited the intermontane valleys. They all lived in small, very nomadic
family-sized groups, their size and mobility reflecting the widely
dispersed and low population numbers of the game on which they subsisted.
This was an effective cultural adaption, and it characterized not only
the original peoples, but later arrivals as well; some, such as the
Stones, came from more highly organized societies. Small sized, mobile groups would also characterize the earlier peoples who inhabited the area as well. As will be discussed in Chapter 4, this seems to have been the pattern prevalent throughout most of prehistoric time.
PREHISTORIC SITES AND PEOPLES

Prehistoric site location was the prime objective of the archaeological inventory, which concentrated on the high use areas of the Athabasca Valley and adjacent valleys in 1970, and low use areas in the northern part of the Park in 1971. The inventory located 50 prehistoric sites within the Park confines (Table 2, Map 2) and 40 (Map 2) adjacent to it. These represent a variety of past Native activities over the past 10,000 years. Those sites in the Park are individually described in this chapter, and certain of those outside are briefly noted in Appendix 1. A discussion of past Native culture history and settlement concludes the chapter. It is based on both the data collected in the field and historical-ethnological considerations.

PREHISTORIC SITES

Prehistoric sites discussed in this section are arranged by Borden Site Designation Number (see Glossary) beginning with the Athabasca Valley (pp. 48-75) and followed by the Snake Indian-Glacier Pass regions (pp. 75-93). Locations and descriptions are given for each site. Artifacts collected are described in detail, and their distribution is summarized in Table 3. Individual recommendations are also presented for further study if warranted. Site locations are shown on Map 2. Appendix 2 has a detailed discussion of the projectile point types referred to in the following descriptions, and Appendix 3, a discussion of the types of rocks/mineral used in stone tool manufacture. Appendix 5 contains a Glossary of terms. A more summary discussion of site impairment and recommendations is presented in Chapter 5.
ATHABASCA VALLEY

FcQm-1

Location: FcQm-1 was an isolated artifact find located 24-28 km by horse up the Whirlpool Trail from the line cabin at the termination of the Whirlpool fire road. In 1967, while on patrol, Don Rose (Ass't Warden, Pocahontas) found an artifact along the horse trail just west of the mouth of Scott Creek and approximately 30 m from the Whirlpool River.

Description: The site area is characterized by sparse vegetation -- alpine spruce, shrubs and lichen -- and very little soil deposition. The area is known as Scott Flats, a glacial outwash plain, consisting of gravels with a silt matrix deposited by Scott Glacier and later Scott Creek.

Artifacts: A single, bifacially worked lanceolate biface (length 12.5 cm, width 4.0 cm, thickness 1.4 cm)(Pl. 10:A), probably a knife-like tool, was found. Shaped by soft hammer percussion its edges were sharpened by the removal of small, short travelling flakes detached by pressure.

Discussion: The artifact is probably of recent age, as the area was glaciated during the neoglacializations (see p. 14).

Recommendations: None.

FdQ1-1 (Pl. 4A)

Location: FdQ1-1 is a campsite located on the north side of the Athabasca River adjacent to Athabasca Falls, in the general area which now comprises the picnic grounds. The site area incorporates the road bed (Athabasca Falls road) and the picnic grounds, 175 m to 50 m east from the falls and 10 - 80 m north from the river's edge.
Description: The site area is south-facing, situated where the Athabasca bends from its northerly course to a westerly direction on its approach to the falls. Situated on a terrace consisting of light brown sand, the site is approximately 1.5 m above the present river level. Covered with grass and scattered coniferous growth, the site's surface is uneven due to extensive tourist use facilities. Scattered artifacts are exposed in the disturbed surface.

Artifacts: Three tools and 40 flakes were collected. Lithic types represented consist of quartzites (N=12), Nordegg Chert (N=26), black chert (N=2), vitreous black chert (N=1), Banff Chert (N=1), and grey siliceous siltstone (N=2). The tools include:

Retouched Flakes (N=2)

(1) A large black vitreous chert flake (length 4 cm, width 3.5 cm, thickness 2.7 cm, weight 20.5 gms)(Pl. 10:B ) either broken during or after manufacture, has abrupt pressure retouch along one lateral edge.

(2) A light grey siliceous siltstone tool (Pl. 10:C ) (length 3.5 cm, width 2.2 cm, thickness 0.7 cm, weight 4.6 gms.) exhibits use as a graving tool on the distal end where the natural edge of one lateral side meets the broken edge of the other side. Abrupt scalar retouch is present along the broken edge. It has a great deal of wear.

Utilized Flakes (N=1)

A pink coloured quartzite flake fragment (Pl. 10:D) (length 4.0 cm, width 2.3 cm, thickness 0.8 cm, weight 1.0 gms) has use wear along one lateral edge. Retouch is absent. It was broken laterally during detachment by hard hammer percussion from the core. The edge was utilized for cutting and
scraping.

Discussion: The site was tested in 1970. An occupation level of 30-40 cm below surface with scattered flakes above was found. This may indicate more than one occupation. The area does not appear to be intensively exploited. Nonetheless this campsite marks the most southerly extension of known prehistoric activity in the Athabasca Valley. The site is of further value.

Recommendation: High visitor use of this locality is rapidly eroding the site area and decreasing its value. Extensive testing should be undertaken to determine the site's function, cultural and age associations.

FeQl-2

Location: FeQl-2 is a workshop located on the north side of the Athabasca River directly across from the mouth of the Whirlpool River.

Description: The site is situated on the 1-1.5 m floodplain terrace immediately above the Athabasca River. A reddish silt/sand, 15 cm thick, overlies glacial and riverine gravels. Site vegetation consists of thick Jack pine growth and grass.

Artifacts: Gordon Bried collected a large corner notched projectile point, typed as Pelican Lake Corner Notched, from this site (Pl. 10:K)(length 3.9 cm, width 2.3 cm). It is manufactured on a Banff chert flake. Retouch is mostly unifacial, only the basal edges, notches and lateral edges have bifacial retouch. The formative aspects of the point were produced by soft hammer percussion flaking, usually short travelling. The oblique transverse break at the tip is suggestive of an accidental break, rather than resulting from impact. In 1971, 16 quartzite flakes were collected. The majority of these were produced by
Discussion: The site area is limited and slumping into the river. Because of its relationship to the mouth of the Whirlpool River it may have been the east side of a ford or merely a small workshop. It however indicates the prehistoric use of the Whirlpool River-Athabasca Pass route. The projectile point type (Pelican Lake) suggests a tentative date of ca 3000-1500 years ago.

Recommendations: None, the site is of no further value.

FfQk-1

Location: FfQk-1 was a campsite located on the northeast side of Medicine Lake adjacent to the Beaver Lake discharge stream - Medicine Lake confluence.

Description: The site was situated on a gravel beach, above the high water line. It was destroyed by construction of the Maligne Lake Road.

Artifacts: Gordon Bried collected a large stone axe (Pl. 15:A) and reported that many flakes were found at the site. The "axe" was ground and pecked from a large quartzite spall (length 11.4 cm, width 8.5 cm).

Discussion: The site's location suggests it may have been a campsite.

Recommendation: None.

FfQm-2

Location: FfQm-2 is a campsite located on the north side of the Miette River and the west side of the Athabasca River at the junction of the two rivers. The site incorporates Tekerra Lodge.
Description: Situated on a bench or riverine terrace development, the site lies approximately 15 m above the river's confluence. The terrace is composed of small to large quartzite boulders and cobbles, overlain by 15 cm of silt. Vegetation consists of grass and large spruce.

Artifacts: One unifacially worked tool and one large unworked flake, both of quartzite were collected. Both are decortication spalls detached by hard hammer from a quartzite cobble. The unifacial tool (Pl. 16:A) was produced on a large decortication flake (length 9.6 cm, width 7.6 cm, thickness 4.5 cm, weight 337.5 gms) derived from a projecting corner of a cobble. The tool's ventral surface along one lateral side, was altered by the removal of percussion flakes producing a convex edge. This edge shows definite rounding and scalar retouch as a result of wear from a scraping function.

Discussion: The site is severely eroded. It may have been a small campsite.

Recommendation: None, the site is of no further value.

FfQm-3

Location: FfQm-3 was an isolated find located on the east side of the Athabasca River downstream from the Miette-Athabasca River junction, on a promontory known as Old Fort Point.

Description: Old Fort Point is a bedrock isolate which rises sharply west to east. It has a flat area prior to the summit. The flat is grass covered with scattered conifers.

Artifacts: A single white chert flake graver (Pl. 10:H) (length 2.0 cm, width .45 cm, thickness .4 cm, weight 1.0 gm) was collected. The distal end of the flake was altered by steep and abrupt
pressure flaking to produce a projecting tip. This tip exhibits scalar retouch as well as some edge rounding from wear. The edges either side of the tip show pronounced wear. The lateral edges are not modified but do display some use wear. The graver was likely used for incising bone, antler or wood.

**Discussion:** Old Fort Point offers good visibility both up and down the Athabasca River. FfQm-3 probably served as a game lookout.

**Recommendations:** None, the site is of no further value.

**FfQm-4**

**Location:** FfQm-4 is a campsite located on Highway 16, 4.2 km north of the Maligne turnoff. Artifacts were found in the road cut on the west side of the highway, directly across from the Maligne-Athabasca River junction.

**Description:** Conifers and grass cover the site area which is situated on the first river terrace above the floodplain. The terrace is composed of alluvial sand and gravels. It rises approximately 10 m above the Athabasca River. Construction of Highway 16 truncated the terrace. The remainder of the site areas was altered by landscaping.

**Artifacts:** Two artifacts were collected. A bifacial thinning flake of white quartzite and a utilized flake of Glacier Pass siliceous mudstone (Pl. 10:E). The utilized flake (length 1.5 cm, width 1.2 cm, thickness .3 cm, weight .5 gm) is broken with the distal end missing. The striking platform is prepared and concave shaped. The right lateral edge displays wear and reduction through use.

**Discussion:** FfQm-4 was probably a small campsite. Its destruction has left little evidence as to its size and function.

**Recommendations:** None, it is of no further value.
FfQm-5  (Pl. 4B)

Location:  FfQm-5 was a campsite located on the west side of the Athabasca Valley at the outlet of Pyramid Lake, on both side of the Pyramid Lake discharge stream adjacent to the fire road bridge (Pyramid Lake Fire Road).

Description:  The site was exposed and mostly destroyed by road cutting and barrow pitting. Situated on an upper valley train terrace composed of glacial and stream deposited gravels and sand, the site area was covered with conifers, shrubs and grass.

Artifacts:  Fifteen artifacts were recovered. Of these, 13 are coarse grained quartzite flakes all of which are percussion produced, some with heavily ground platforms. The remaining two artifacts consist of a small biface fragment and a utilized flake fragment.

The biface fragment (Pl. 10:G), manufactured from Nordegg chert, is probably a body fragment of a projectile point (length 2.0 cm, width 1.7 cm, thickness 0.5 cm, weight 1.0 gms). It was shaped by pressure flaking. The flake scars meet roughly at the midpoint of the longitudinal axis.

The utilized flake fragment (Pl. 10:F) is parallel sided manufactured from quartzite. Both the proximal and distal ends are missing. Only the left lateral edge shows use rounding and faceting.

Discussion:  FfQm-5 was probably a campsite. The stream would offer a clean water supply and possibly fishing while the Pyramid Lake area would offer good hunting. It may be related to site FfQm-6 (see below).

Recommendation:  Limited testing of the periphery of the barrow pit and on the south side of Pyramid Lake outlet is recommended to determine if any areas of value still exist.
**FfQm-6**

**Location:** FfQm-6 is a campsite located on the west side of the Athabasca Valley where the Pyramid Lake road crosses Cottonwood Creek. The site area encompasses both side of the Creek on the north side of the road.

**Description:** Stream and glacial deposited sand and gravels have formed a low bench terraced by Cottonwood Creek. The site area encompasses approximately 500-750 m of this terrace development. Spruce, poplar and grass cover the area.

**Artifacts:** Thirty artifacts were collected, 21 of these are flakes and flake fragments. Lithic types represented include Shield (N=3) and Rocky Mountain (N=2) quartzites (Appendix 4), crystalline quartz (N=1), white quartz (N=3), dull black chert (N=10), Nordegg chert (N=4), Glacier Pass siliceous mudstone (N=3), grey banded chert (N=3) and impure chalcedony (N=1). Most flakes were percussion produced. Some display cortex suggesting some core or preform reduction took place. The tools include:

**Projectile Points (N=2)**

1. A broken corner notched Pelican Lake type projectile point (Pl.10:I ) (length 5.7 cm, width 2.0 cm). The point is bifacial, shaped by parallel pressure flakes meeting along the longitudinal axis.

2. A black chert projectile point tip (Pl. 10:J ) similar in shape as that previously described (length 2.3 cm, width 1.5 cm).

**Bifaces (N=2)**

Two biface base fragments, one of grey banded chert and the other of quartzite (Pl.10:L,M). Neither displays edge
reduction which could not be attributed to platform preparation. Both have a plano-convex cross section. The chert fragment (length 5.7 cm, width 3.0 cm, thickness 1.1 cm, weight 21.5 gms) appears to have been resharpened.

**Utilized Flakes (N=1)**

A white quartz percussion flake fragment with some edge reduction and wear midway along the right lateral edge (Pl. 10:0) (length 4 cm, width 3.1 gms).

**Retouched Flakes (N=1)**

A large coarse grained quartzite spall with percussion retouch (Pl. 17:A) (length 16.6 cm, width 9.1 cm, thickness 4.7 cm, weight 750 gms) and much use faceting along both lateral edges. Of particular note is a shaped concavity in the middle of the right lateral edge.

**Discussion:** FfQm-6 is probably a campsite. Its location allows excellent sun exposure, a good supply of clear water and is in close proximity to Patricia Lake. The Pelican Lake type projectile point suggests a tentative date of 3000-1500 years B. P.

**Recommendation:** The site is relatively undisturbed and is of value. Testing is required to determine its further value.

**FfQm-8**

**Location:** FfQm-8 was an isolated artifact find located at the outlet end of Cabin Lake, now the location of the dam for the Jasper Water supply.

**Description:** The site area has been destroyed by the construction of a dam and barrow pitting. The land form would have been a combination lake and stream terrace development, comprised of
alluvial sands and glacial gravels. Vegetation consists of spruce, pine and deciduous growth.

Artifacts: A single leaf-shaped biface collected by an unknown person is on display in the Banff School of Fine Arts Indian Display. Approximately 15 cm long, it was shaped by soft hammer percussion.

Discussion: As the site area is destroyed and only a single artifact was collected, it is impossible to speculate as to the function of the site.

Recommendation: None.

FfQm-9

Location: FfQm-9 was a campsite located on the west side of the Athabasca Valley at the Pallisades Creek-Athabasca River junction where Highway 16 crosses Pallisades Creek.

Description: The site area was destroyed by stripping off the surface and the removal of the underlying gravels for road construction. The highway itself truncated the front edge of the lower floodplain upon which the site was situated. Scattered conifers and grass covered the site area.

Artifacts: The site was collected from by Mr. Gordon Bried for a number of years prior to its destruction. No further artifacts were collected during the survey in 1971. Among the artifacts collected by Mr. Bried were a number of small side notched projectile points (subsequently given to the Park Service and later lost), 3 small bifaces, 3 unifaces and a small endscraper.

Bifaces (N=3) (Bried Collection)

(1) A small lanceolate biface of white quartz (Pl. 10:N ) (length 4.2 cm, width 2.9 cm). Shaped by random percussion flaking,
it may have been the nuclei discard of a large biface. Little edge reduction is present.

(2) A small ovoid biface of white quartz (Pl. 10:P) (length 4.5 cm, width 3.8 cm). It was shaped by percussion with some pressure retouch along the lateral edges. Edge reduction and rounding from wear is apparent along both lateral edges.

(3) An asymmetrical ovate biface of a dark grey quartzite (Pl. 11:A) (length 6.2 cm, width 5.7 cm). Shaped by percussion, the edges were apparently resharpened by pressure retouch. The edges are extremely rounded from use.

Unifaces (N=3)

(1) An asymmetrical lanceolate shaped uniface of dark grey quartzite (Pl. 11:B) (length 6.7 cm, width 3.8 cm). Produced from a broken percussion blank, the striking platform was thinned by both percussion and pressure flaking to produce a pointed cutting edge. The entire ventral surface is flaked, the right lateral edge is steep. It was apparently used as a scraping edge. Both lateral edges exhibit rounding from use.

(2) An asymmetrical ovoid shaped uniface of white quartzite (Pl. 11:C) (length 9.3 cm, width 5.5 cm). The ventral surface is characterized by numerous step fractures. Apparently resharpened on more than one occasion, the lateral edges exhibit marginal pressure retouch as well as overall percussion flaking. The right lateral edge displays use wear along its entire length while the left lateral edge shows wear near the proximal end.

(3) A large asymmetrical foliate leaf-shaped uniface of quartzite (Pl. 11:D) (length 13.9 cm, width 7.1 cm). The ventral
surface displays a large area of steep step fracture along the right lateral edge. The left lateral edge is much shallower.

Endscraper (N=1)

A small endscraper of dull black chert (Pl. 11:G) (length 1.8 cm, width .6 cm). It is steeply pressure retouched along the distal and lateral edges. The convex shaped scraping face is highly faceted by scalar retouch. The edge is still sharp.

Discussion: The presence of cutting tools as well as Mr. Bried's reference to a number of small side notched points suggests that FfQm-9 was a campsite, possibly with associated kill and butchering activities. The small notched arrow points indicate the site dated between A.D. 500 and historic times.

Recommendation: None, the site is destroyed.

FgQm-1 (Pl. 5A)

Location: FgQm-1 is a campsite located on the south side of the Athabasca River adjacent to the Cold Sulphur Springs. It overlooks the head of Jasper Lake.

Description: The site is situated 50-90 cm below surface on a lower valley train terrace remnant. The terrace is composed of glacial gravels, overlain by 90-100 cm of aeolian silt. The terrace rises some 100 feet above the river. Construction of Highway 16 sheared off at least the front third of the terrace. Scattered conifers and grass cover the site area.

Artifacts: A total of 14 artifacts were recovered including 10 flakes and flake fragments and 4 tools. In addition two fragments of shell were recovered. The flakes are predominantly quartzites (Rocky
Mountain [N=3], Shield [N=5]). Singular specimens of black chert and light brown siliceous siltstone are present. Two quartzite flakes have crushed striking platforms and low bulbar profiles, characteristic of flakes produced by indirect percussion.

**Tools**

1. A unifacial chopping tool manufactured from dolomite spall (Pl. 16:C ) (length 13.8 cm, width 10.0 cm, thickness 3.8 cm, weight 611.2 gms). The ventral surface was altered around the outer perimeter by hard hammer percussion resulting in the right lateral and proximal edges serving as cutting or chopping surfaces. On the dorsal surface these same edges display extreme edge reduction with steep step fractures.

2. A quartzite slab (Pl. 16:B ) (length 15.1 cm, width 5.9 cm, thickness 2.1 cm, weight 348.5 cm) which has a bifacial edge with a concavity on both the ventral and dorsal surfaces along the same edge. This edge exhibits extreme rounding from use and the distal end is battered. Presumably utilized as a chopping tool.

3. A retouched utilized flake fragment of white quartzite (Pl. 11:E ) (length 7.6 cm, width 4.5 cm, thickness .5, weight 4.2 gms). The left lateral edge has some marginal retouch as well as edge wear.

4. A retouched black chert fragment (Pl. 11:F ) (length 2.2 cm, width 1.4 cm, thickness 0.5 cm, weight 21.0 gms). Only one edge exhibits retouch and use wear. The fragment is truncated laterally and distally by near 90° breaks.

**Discussion:** The types of tools collected suggest it served as a campsite or small butchering or bone grease processing site. A
relatively early age is indicated by the location of the site, its
elevation above the river and depth of occupation (50-90 cm). Limited
testing in 1971 provided no additional data.

**Recommendation:** The site is of further value and limited
testing in select areas (i.e. the south end of the site) is recommended.

**FgQm-2**

**Location:** FgQm-2 is a campsite located approximately 1.5 km
south of the Snaring River Camp Ground and 5 km east along the southern
t edge of a small lake.

**Description:** The site is situated on stabilized sand dunes 10 m
above a river margin lake. Site area is grass covered with groves of
mixed conifers and deciduous growth.

**Artifacts:** Six quartzite artifacts were collected: four flakes,
a scraping tool and a chopping tool. The scraping tool was produced on
a hard hammer percussion flake. The scraping edge was formed by removal
of steep soft hammer percussion flakes along the distal end of the flake
(length 5.2 cm, width 4.5 cm, thickness .4 cm, weight 35.5 gms).

The chopping tool was formed from a tabular fragment of
quartzite. Hard hammer percussion flakes were removed along a lateral
edge to produce the chopping edge (length 12.2 cm, width 6.2 cm, thick­
ness 3.8 cm, weight 300.9 gms).

**Discussion:** FgQm-2 is probably a small campsite. The two
tools suggest activities such as hide and bone grease preparation.

**Recommendation:** Test to determine if of further value. See
p.28 for historic site recommendation.
FgQm-3

Location: FgQm-3 is a game lookout located on the west side of the Athabasca Valley approximately 3.4 km northeast of the Snaring Warden's station along the Celestine Lake Road. The site lies 100 m east of the road.

Description: The site is situated on an alluvial fan terraced by riverine action. The fan is composed of silt and sand over gravels. It is covered with grass, willows, spruce and pine.

Artifacts: Four flakes were recovered manufactured from black chert and Rocky Mountain quartzite (N=3). All were produced by hard hammer percussion.

Discussion: The site probably was a lookout over the Athabasca Valley.

Recommendation: None.

FgQm-5

Location: FgQm-5 is a workshop located on the west side of the Athabasca adjacent to the headwaters of Jasper Lake approximately .4 km from the Snaring Warden's station.

Description: The site is situated on the terraced edge of an alluvial fan above the headwaters of Jasper Lake. The fan consists of alluvial silt and sand over gravels. The site is approximately 100 square meters in area adjacent to a small inlet opposite FgQm-6. Vegetation consists of open grass with scattered conifers and deciduous growth.

Artifacts: Three flakes were collected manufactured from brown chert (N=1), Nordegg chert (N=1), and quartzite (N=1). They are all the product of soft hammer percussion.
Discussion: The site, overlooking the lake, may be a small workshop. More likely, it is related to activities at FgQm-6.

Recommendation: Test, unknown value. (See FgQm-6)

FgQm-6 (Pl. 5B)

Location: FgQm-6 is a base campsite located on the west side of the Athabasca at the head of Jasper Lake. It extends from behind the Snaring Warden's Station across the Celestine Lake Road to the edge of Jasper Lake.

Description: The site, ca 5000 m$^2$ in area, is situated on an alluvial fan terraced by riverine and lake action. The site surface lies 3 to 5 m above the lake. The fan is composed of sand and silt overlying gravels. The site area is open and extensively wind deflated, characterized by a light grass cover with coniferous and deciduous growth around its perimeter. A pipeline cut runs through the main site area parallel with the Celestine Lake road.

Artifacts: Two hundred and seventy-six chipped stone artifacts, including 19 tools, were collected. Lithic types represented include Shield quartzites (N=12), Nordegg chert (N=48), Glacier Pass siliceous mudstone (N=20), green-brown chert (N=15), grey chert (N=17), black chert (N=17), white chert (N=9), dolomite (N=5), Banff chert (N=5), grey vitroous chert (N=5), black vitroous chert (N=3), light green siliceous siltstone (N=3), grey banded chert (N=3), and single examples of white quartz, grey and green siliceous siltstone and white chalcedony. Most flakes are fragmentary (N=195). They represent most stages of lithic technology including primary and secondary decortication flakes (N=6), core fragments (N=2), and bifacial thinning and resharpening flakes (N=55). The tools include:
Projectile Points (N=4)

(1) A side notched projectile point of unknown type, made of grey chert (Pl. 12:A) (length 2.9 cm, width 1.6 cm, thickness 0.6 cm, weight 2.4 gms). The point was shaped by random pressure flaking. It has poorly defined side notches with rounded basal edges and shoulders. Similar projectile points occur in the Bried Collection (Pl. 13:C).

(2) An unnotched triangular projectile point of fine grained grey quartzite (Pl. 12:B) minus the tip (length 2.1 cm, width 2.0 cm, thickness 0.5 cm, weight 2.3 cm). Shaped by pressure flaking, only the ventral surface has flake scars over the entire surface. The dorsal surface has basal and left lateral edge retouch. Similar points occur in the Bried Collection and in the Athabasca Valley (Pl. 18:P, Q).

(3) A large stemmed, black chert projectile point of the Alberta Point type, broken above the shoulders (Pl. 12:D) (length 4.7 cm, width 3.0 cm); found by Gordon Bried. The form has several burin blows directed down from the break along the left lateral edge. This point type dates ca 9500-7000 years ago.

(4) An ovate, black chert projectile point characterized by a straight base (Pl. 12:C) (length 3.5 cm, width 3.1 cm, thickness 0.6 cm, weight 8 gms); tentatively identified as a reworked Plainview point type. The ventral surface is completely covered with flake scars. The dorsal surface has an area of original flake surface. The base is thinned by short travelling flakes. Edge grinding is present. Poorly defined flaking from midway in the body to the tip suggests
the point was broken and subsequently resharpened producing exaggerated rounding of the tip. The type dates ca 10,000 years ago.

Endscrapers (N=4)

(1) A small, dorsally modified, unifacial black chert endscraper (Pl. 12:E) (length 2.2 cm, width .6 cm, thickness 0.65 cm, weight 2.1 cm). Pressure flake scars meet on an off-centre longitudinal line forming a dorsal ridge. The distal scraping end was altered by the removal of steep pressure flakes forming a straight to slightly convex edge. Proximal end is thinned indicating the endscraper was hafted.

(2) A dorsally unmodified, black chert endscraper (Pl. 12:F) (length 2.2 cm, width 1.9 cm, thickness 0.5 cm, weight 2.0 cm). The distal end was modified by the removal of steep abrupt pressure flakes producing a convex scraping edge.

(3) A black chert, distal endscraper fragment (Pl. 12:G) (length 2.2 cm, width 2.0 cm, thickness 0.7 cm, weight 2.6 cm). Dorsal flaking is limited to the right lateral edge. The distal edge was modified through the removal of steep pressure flakes producing a concave scraping edge. Subsequent resharpening and use produced a concavity in the center of the scraping edge and step fracture along the face of the edge.

(4) A grey chert endscraper produced on a large flake fragment (Pl. 12:H) (length 3.5 cm, width 2.9 cm, thickness 0.8 cm, weight 5.0 cm). Presumably hand-held; there are no modifications other than the scraping edge. The straight scraping edge was produced by the removal of steep, abrupt
pressure flakes. The edge exhibits rounding and step fractures from use.

**Bifaces (N=4)**

(1) An asymmetric, grey quartzite, ovate biface (Pl. 12:I) (length 7.9 cm, width 5.1 cm) characterized by a thick cross section and large step fractures on the ventral surface (found by Gordon Bried). The left lateral edge has two concavities, apparently the result of the removal of sharpening flakes. The distal end (tip) has been broken and steeply retouched on the dorsal surface. The resulting edge is extremely rounded from wear. The right lateral edge is pressure and percussion retouched along its entire length producing a steep bevel on the ventral surface. This edge was apparently utilized for some scraping function.

(2) A small, light green siliceous siltstone biface end fragment; probably leaf-shaped in complete form (Pl. 12:J) (length 2.8 cm, width 2.1 cm, thickness 0.8 cm, weight 4.0 gms). Bifacially percussion flaked, the biface was likely broken during resharpening. The edges display wear and faceting.

(3) A small, black chert biface mid-section fragment possibly broken during manufacture or resharpening (Pl. 12:K) (length 3.2 cm, width 2.7 cm, thickness 0.8 cm, weight 5.9 gms). Edge reduction and faceting from use or from platform preparation occurs. The fragment was shaped by soft hammer percussion.

(4) A small, quartzite bifacial edge section possibly the result of an intentional fracturing of a biface to produce wedges (Pl. 12:L) (length 1.8 cm, width 1.8 cm, thickness .8 cm, weight 3.8 gms). The fractured edge is not battered.
Drills (N=1)

A drill butt of Nordegg Chert; the drill stem is broken off just below the shoulders of the butt (Pl. 12:M) (length 2.6 cm, width 2.4 cm, thickness 0.8 cm, weight 4.7 cm). The butt appears to have been the distal end of a percussion flake with the stem manufactured towards the striking platform. The butt has no modification other than those associated with the formation of the stem.

Incising Tools (N=2)

(1) A large, black vitreous chert flake fragment exhibiting unifacial and some bifacial modifications to produce a protruding point (Pl. 12:0) (length 5.0 cm, width 3.4 cm, thickness 1.3 cm, weight 22.5 gms). This point has some rounding and was apparently much larger having been broken and then resharpened by either burin-blows or small pressure flakes. The adjacent edge is bifacially modified. It has no wear or use patterns.

(2) A small, grey chert flake fragment which has some unifacial modifications along the right lateral edge producing a protruding tip at the proximal end (Pl. 13:A) (length 2.1 cm, width 1.9 cm, thickness 0.8 cm, weight 3.4 cm). This tip shows wear faceting and use reduction.

Retouched and Utilized Flakes (N=4)

(1) A black chert flake fragment with a retouched and heavily utilized section along one edge (Pl. 12:N) (length 3.4 cm, width 2.8 cm, thickness 0.45 cm, weight 4.8 cm). This edge is rounded and faceted from use.

(2) A black chert percussion flake with wear rounding and faceting along the left lateral edge (Pl. 12:P) (length 4.6 cm, width 2.0 cm, thickness 0.8 cm, weight 5.7 cm). This edge is rounded and faceted from use.
cm, width 3.0 cm, thickness 0.6 cm).

(3) A buff-grey banded chert percussion flake with an abruptly retouched concave edge (Pl. 12:Q )(length 3.9 cm, width 3.2 cm, thickness 0.6 cm, weight 4.1 gms).

(4) A Banff chert thinning flake with abrupt, steep retouch along both lateral edges (Pl. 13:B )(length 3.1 cm, width 2.3 cm, thickness 0.3 cm, weight 2.6 gms). The left lateral edge has some rounding from use. The right edge is still sharp.

Discussion: FgQm-6 is a large and quite ancient campsite. It is an anomaly in the Athabasca Valley where most campsites are small, single occupation hunting camps, representing one or two families. FgQm-6 is a much more extensively utilized site with multiple occupations.

The site area is badly wind deflated. Cursory testing in 1970 revealed that the majority of the cultural material occurs on or very near the surface. The various projectile point types suggest considerable time span, and therefore little sediment accumulation through time. The artifacts collected depict the whole range of Native activities suggesting a relatively long term base camp from which small parties of hunters departed. The small workshop and lookout sites on the west side of the lower Athabasca Valley may relate to the hunting activities originating from FgQm-6.

Recommendation: The site is potentially of considerable value. Extensive testing is required to determine if locales exist where occupations can be separated. The FgQm-5 terrace margin should be included in the testing.
FgQm-7

Location: FgQm-7 is a small lookout/workshop located on the west side of the Athabasca Valley overlooking Jasper Lake. The site is located approximately 6.4 km along the Devona Road from Celestine Lake/Devona Warden's Station Road junction.

Description: The site is situated on a lower valley train terrace consisting of alluvial silt and sand over glacial gravels. Site vegetation consists of grass with scattered coniferous and deciduous growth. The site area is susceptible to wind erosion. It is scarred by "blowouts".

Artifacts: Three Rocky Mountain quartzite flakes were collected, all of which were produced by hard hammer percussion.

Discussion: This site is a lookout/small workshop. Its location, some 75 m above Jasper Lake, offers an advantageous view.

Recommendation: None.

FgQm-8

Location: FgQm-8 is a lookout/workshop located on the north side of the Snake Indian River and west side of the Athabasca River approximately 1.2 m east of Celestine Lake in a road cut which goes down to the Athabasca floodplain.

Description: The site is situated on the edge of a lower valley train terrace facing southeast over the Snake Indian River. The terrace is composed of a shallow silt/sand deposits over glacial gravels. It is covered with grass, scattered spruce trees and deciduous growth.

Artifacts: Four flakes were collected; two manufactured from Glacier Pass siliceous mudstone and two from Rocky Mountain quartzite. The Glacier Pass siliceous mudstone specimens are fragmentary and exhibit large striking platforms resulting from direct, hard hammer percussion.
One has cortex along one lateral edge. The remaining flakes were also percussion produced.

**Discussion:** The site is a lookout/workshop. The decortication flakes indicate core reduction while the location of the site would afford a good view of the surrounding area.

**Recommendation:** None.

**FgQm-11**

**Location:** FgQm-11, an isolated find, was located approximately .8 km northwest of the Devona Warden's Station, parallel to the Snake Indian River.

**Description:** The site is situated on the top of an esker running parallel with the Snake Indian River. The esker is composed of loess over glacially deposited gravels. Vegetation consists of a light grass and sage cover with isolated spruce trees.

**Artifacts:** A single retouched, Glacier Pass siliceous mudstone flake produced by direct percussion. The entire length of one lateral side is marginally retouched. An incising tip was produced in the middle of this edge.

**Discussion:** The esker rises 10-15 m above an uneven surface, and has an unobstructed view in an area where game movements to and from the Athabasca floodplain could be observed. The site was probably a lookout.

**Recommendation:** None.

**FgQm-12 (Pl. 6A)**

**Location:** FgQm-12, a campsite, is located on the east side of the Athabasca River approximately 200 m upstream from the intersection of Highway 16 with Morrow Point.
Description: The site is situated on a terrace between two bedrock projections. The terrace is composed of 10-15 cm of alluvial silt underlain by gravels and bedrock. It is wind deflated. A light grass cover with scattered deciduous and coniferous growth occurs.

Artifacts: Gordon Bried collected three tools and an English Gun flint (Brandon type)(see Elliott 1970-71: Fig. 12c). A re-survey of the area in 1971 recovered another large tool. These tools include:

**Projectile Points (N=1)**

A white quartz projectile point (Pl. 13:C) (length 2.8 cm, width 1.9 cm) of unknown type, characterized by wide shallow notches, an asymmetrical straight to convex base and a thick cross section (Gordon Bried Collection).

**Bifaces (N=3)**

(1) A large, crystalline quartz ovoid biface produced by soft hammer percussion (Pl. 13:D) (length 7.4 cm, width 6.6 cm). The left lateral edge is utilized, but the right lateral edge displays the original crystalline surface (Bried Collection).

(2) A small, grey quartzite ovate biface produced by soft hammer percussion, then later resharpened by the removal of small percussion flakes (Pl. 13E) (length 5.5 cm, width 3.5 cm). The tip/point and lateral edges are rounded from use (Bried Collection).

(3) A large chopping tool or axe of a coarse grained quartzite, produced on a large decortication spall (Pl. 17:B) (length 16.6 cm, width 9.1 cm, thickness 3.3 cm, weight 280 gms). The cortical dorsal surface is marginally percussion retouched on the ends and the mid-sections of the lateral edges are rounded, perhaps to facilitate hafting.
Discussion: Two large hearths containing rock and fire broken rock with associated fragments of burned and calcified bone were noted. The tools collected combined with the quantities of burned and calcified bone fragments associated with the hearths suggests FgQm-12 was a campsite and/or a butchering station. Its location is one of the few good camping sites on the east side of the upper Athabasca Valley. The projectile point has no specific temporal/cultural associations. The gun flint, found by Bried, is historic in age and is an indication of the historic route along the east side of the Athabasca River.

Recommendation: The site is of value. Limited testing in areas not wind deflated is required to establish extent of utilization, site function and to obtain dating control.

FgQm-13

Location: FgQm-13, a small workshop, is located approximately 200-250 m upstream from FgQm-12 on a low bedrock projection into the Athabasca River.

Description: The site is situated on a 3-4 m high bedrock formation projecting into the Athabasca. Wind erosion has deflated the site's surface exposing a bed of quartzite cobbles on the bedrock. Vegetation is limited to patches of grass and lichen.

Artifacts: Twelve flakes were collected; ten of which are Rocky Mountain quartzite and the remaining two, Nordegg Chert flake fragments. The quartzite flakes were produced by hard hammer percussion.

Discussion: The site functioned as a small workshop possibly producing tools or preforms from the available quartzite cobbles.

Recommendation: None
FgQm-14 (Pl. 6B)

Location: FgQm-14 is a lookout located on the summit of the bluff which separates Edna and Talbot Lakes.

Description: The site is situated on a bedrock isolate which rises 125-150 m above the lakes. The "bluff" has a series of benches composed of wind deposited sand and silt overlying bedrock. The summit is wind eroded exposing scree and bedrock. Surrounding vegetation consists of grass and scattered conifers.

Artifacts: Eighteen artifacts were collected; five of which are tools. Among the remaining artifacts there are blade-like core fragments (N=2), secondary decortication flakes (N=3), tertiary flakes (N=2) and flake fragments (N=5). All are produced by soft hammer percussion. Lithic types include Glacier Pass siliceous mudstone (N=8), grey chert (N=4), black chert (N=2), Nordegg chert (N=2), green siliceous siltstone (N=1) and Banff chert (N=1). The tools include:

**Projectile Points (N=3)**

1. A small, black chert Prairie Side Notched Point (Pl. 13:F) (length 2.2 cm, width 1.6 cm, thickness 0.4 cm, weight 1.0 gms). The point is bifacially pressure flaked. Flake scars overlap at the longitudinal axis.

2. A small, corner notched arrow point of Glacier Pass siliceous mudstone (Pl. 13:G) (length 2.5 cm, width .4 cm, thickness 0.6 cm, weight 1.5 gms). The point is completely bifacial except for a central area of step fracturing on one surface.

3. A Banff chert projectile point of the Oxbow type characterized by a concave base and small side notches (Pl. 13:I) (length 2.7 cm, width 2.0 cm, thickness 0.6 cm, weight 2.6 gms).
The ventral surface has a central ridge formed as the flake scars met from either side. The dorsal surface has marginal retouch around the perimeter of the point.

**Retouched Flakes (N=2)**

(1) A light grey chert, extremely battered flake fragment (Pl. 13:H). Short percussion flakes were detached along the right lateral edge producing an uneven edge.

(2) A small, black chert fragment which has abrupt retouch along both lateral edges (Pl. 13:J). The right lateral edge has some rounding from use.

**Discussion:** Historically this area was a late fall and winter range for Bighorn Sheep. The occurrence of three stylistically different projectile points around the summit suggests hunting activities continued over some time. The side notched point would likely date later than 1000 A.D., the corner notched point would also date in the Late Prehistoric Period, and the Oxbow type point would date ca 4000 years B.P. The flakedebitage and retouched flakes imply other activities such as gutting or dismemberment of animals for transportation.

**Recommendation:** FgQm-14 is the most promising of the small sites. Limited testing of areas below the summit is recommended to gain a better understanding of the small promontory lookout and workshop activities common in Jasper.

**FhQm-1 (Pl. 7B)**

**Location:** FhQm-1 is a cave located approximately 2.4 km northeast of the Devona Warden's Station at the base of an east-facing cliff.

**Description:** Situated in a cliff face at the top of a scree
slope, the cave is 30-40 m above the valley floor. Facing east, it overlooks the beaver dams on Mud Creek along which the Devona-Moosehorn Trail parallels. The cave is approximately 4-5 m wide, 3.5 m high at the mouth and 10 m deep with a smaller opening at the rear of the cave 3 m in length. The floor of the cave is composed of red earth and roof fall fill over 2 m in depth.

On a rock face near the right side of the cave entrance are a set of pictographs (Pl. 7A ) drawn in orange ochre. The cave floor was covered with considerable detritus including animal feces, wood fragments, and large and small complete and fragmented bones. Remains taken for the purpose of identification include those of a porcupine, ground squirrel, Canada goose and other bird, ungulate and small rodent bones.

Discussion and Recommendation: The cave is of considerable value. It is the only low-level cave known to date in the Rocky Mountains with considerable signs of human use. It should be extensively tested to determine if buried cultural components are present. The pictographs and the smoke blackened roof suggest prehistoric aboriginal utilization of the cave. The cave was first reported by Wayne McCrory and subsequently visited and recorded by Jervis Swannack, of the National Historic Parks & Sites Branch, in June 1967.

SNAKE INDIAN-GLACIER PASS

FiQo-1

Location: FiQo-1, a small lookout/workshop, is located on the north side of the Snake Indian River approximately 500 m north of the Willow Creek-Snake Indian River junction on the east side of Willow Creek.
Description: The site is situated on the edge of an upper valley terrace. It is slumping into Willow Creek. The terrace is composed of a light brown silt/clay, 1 m in depth, overlying riverine gravels. The site is covered with a coniferous forest.

Artifacts: Two flakes were recovered; one of Glacier Pass siliceous mudstone and the other of white quartzite.

Discussion: Slumping of the terrace edge has probably destroyed most of the site. It probably functioned as a small workshop/lookout, as the terrace overlooks large meadows on either side of Willow Creek.

Recommendations: None.

FiQo-3

Location: FiQo-3 is a small campsite located on the north side of the Snake Indian River on the Willow Creek Warden's Station trail, where it crosses an unnamed creek flowing into Willow Creek.

Description: The site is situated on the lower valley terrace (approximately 100 m from FiQo-1) which is the northern boundary of a large meadow. The site incorporates an area of approximately 200 square meters. It is covered by coniferous growth.

Artifacts: A small endscraper and a retouched quartzite decorticaiton spall were collected. The endscraper was produced on the distal end of a small, Glacier Pass siliceous mudstone flake fragment (Pl. 13:N) (length 1.7 cm, width .6 cm, thickness 0.3 cm, weight 0.7 gms). The scraping edge was formed by detaching steep, abrupt pressure flakes along the distal end of the fragment. The edge is rounded with some faceting and step fracture away from the face.

The quartzite spall has marginal, bifacial percussion retouch along both lateral edges (Pl. 13:L) (length 9.4 cm, width 7.8 cm,
thickness 2.0 cm, weight 175 gms). Both edges exhibit rounding and crushing from use. The spall probably functioned as a chopping tool.

Discussion: Fire broken rock and small bone fragments were noted in the site area. This site probably functioned as a small campsite.

Recommendation: The site is of further value. Disturbance is limited to the horse trail. Limited testing is recommended to determine age and cultural association.

FiQo-4

Location: FiQo-4, a campsite, is located on the north side of the Snake Indian River on the Willow Creek-Blue Creek Trail approximately 0.4 km southeast of its junction with the Rock Creek Trail.

Description: The site, 2000 square meters in area, is situated on a low floodplain terrace with southwest exposure, adjacent to an open muskeg area, approximately 175 m north of the Snake Indian River. The terrace consists of alluvial sands and silt. Grass and scattered conifers cover its surface.

Artifacts: A total of 26 artifacts were collected: 24 flakes, one core fragment, and one tool. The flakes are broken from horse traffic over the site. Those with discernible land marks are percussion made. The majority of the flake fragments are white chalcedony (N=18). Glacier Pass siliceous mudstone (N=3), light brown siliceous siltstone (N=2), grey (N=1) and black (N=1) chert occur in lesser amounts.

The only tool is a midsection fragment of a small, Nordegg chert biface -- probably a projectile point. It was shaped by regular pressure flakes which meet along the longitudinal axis (Pl. 13:K) (length 1.9 cm, width 1.5 cm, thickness 0.6 cm, weight 2.5 gms).
Discussion: The site probably functioned as a hunting camp. It may be related to FiQo-8.

Recommendation: The site is of further value. Disturbance is limited to the horse trail. Limited testing is recommended to ascertain age, cultural associations and range of site activities.

FiQo-6

Location: FiQo-6, a small transitory camp, is located on the west side of Mud Creek, approximately 12 m north of the bridge where the Willow Creek-Mud Creek Trail crosses Mud Creek.

Description: The site is situated on an eroding stream terrace above Mud Creek. The terrace has a thin black silt layer overlying clay and gravels. Grass and scattered spruce cover the site area.

Artifacts: Three Glacier Pass siliceous mudstone flake fragments, produced by hard hammer percussion, were collected.

Discussion: The site probably constitutes the remnants of a small workshop.

Recommendation: None.

FiQo-7

Location: FiQo-7, a small campsite, is located on the Willow Creek-Blue Creek Trail approximately 1 km beyond the Rock Creek Trail junction.

Description: The site is situated on a lower valley terrace with a southwest exposure. The terrace fill is alluvial silt/clay over gravels. Boreal forest covers the site.

Artifacts: Five flake fragments were recovered. Lithic types represented are Glacier Pass siliceous mudstone (N=3) and Nordegg chert (N=2). Scattered fire broken rock was noted.
Discussion: The site probably functioned as a small, transitory campsite or workshop.

Recommendation: None.

FiQo-8 (Pl. 8B)

Location: FiQo-8 is a base camp located on the north side of the Snake Indian River on the Willow Creek-Blue Creek Trail, approximately 100-125 m northwest of the Rock Creek Trail junction.

Description: The site (ca 1500 square meters in area) is situated on a low floodplain terrace, with a southwest exposure, overlooking a muskeg area. The terrace is composed of alluvial sands and silt overlying gravel. The site is grass covered with open, mature spruce growth.

Artifacts: The 42 artifacts collected consist of three tools and 39 flakes. The flakes are broken by horse traffic. They consist of the following lithic types: Glacier Pass siliceous mudstone (N=25); white (N=7), Nordegg (N=4), grey (N=1), black vitreous (N=1) cherts and quartzite (N=1). Two are pressure flakes, two secondary decortication flakes and the remainder fragmentary. The tools consist of:

Endscrapers (N=1)

A large, black vitreous chert endscraper with a thick transverse and longitudinal cross section (Pl. 13:M) (length 3.3 cm, width 2.6 cm, thickness 0.9 cm, weight 13.1 gms). Produced from a bipolar flake, the distal and lateral edges have steep pressure flaking. The scraping edge, produced on the distal end of the flake, is sharp with little or no wear.

Bifaces (N=2)

(1) A quartzite, ovate biface with the proximal lateral edge section missing (Pl. 14:A) (length 10.0 cm, width 5.9 cm,
thickness 1.5 cm, weight 71.5 gms). The biface, shaped by soft hammer percussion, was apparently resharpened at least once. This is indicated by a series of flakes removed along the edges which step fractured at approximately the same distance from the edge. The lateral edges exhibit some rounding from use.

(2) A Glacier Pass siliceous mudstone, bifacially flaked, river rolled nodule apparently discarded because of faults within the material (Pl. 14:B)(length 9.1 cm, width 5.5 cm, thickness 2.4 cm, weight 137.6 gms). Exhibiting a great deal of edge preparation (grinding), the biface may have been a core or rejected preform. There is little indication that the edge reduction is due to use.

Discussion: Fire broken rock was scattered intermittently throughout the site area. FiQo-8 is the largest campsite located in the Snake Indian River Valley. It may have served as a base camp from which hunting expeditions departed to different areas within the Valley. Many of the small lookout and/or workshop sites along the river could associate with activities originating at FiQo-8. Testing in 1971 indicated the occupation lay 7 cm below surface.

Recommendation: The site is of further value. Disturbance is limited to the horse trail. Extensive excavation is recommended to determine cultural and age associations and site activities. It is the required site for interpretation of Snake Indian River Valley prehistory.

FiQo-9

Location: FiQo-9, a small workshop, is located approximately
100-125 m north of FiQo-8 and the junction of the Rock Creek Trail with the Willow Creek-Blue Creek Trail.

Description: The site is situated on a lower valley terrace remnant. It has a southern exposure and overlooks a large meadow. The terrace is composed of alluvial silt/clay over gravels. It is covered with grass and poplars.

Artifacts: Eleven flakes and a projectile point base were collected. Lithic types represented include white (N=4), Nordegg (N=3) cherts, quartzite (N=1), Glacier Pass siliceous mudstone (N=3), and white chalcedony (N=1). All of the flakes are small and fragmented. Those with discernible attributes were derived from percussion retouch. The projectile point base is broken just above the basal edges (P1.14:C) (length 2.2 cm, width 1.0 cm, thickness 0.5 cm, weight 1.0 gms). Its base is ground with two central thinning flakes removed by pressure. The size and shape of the base suggests it once was a large corner-notched atlatl point.

Discussion: FiQo-9 may have been a small workshop or hunting camp. The adjacent meadows are frequented by small herds of cow elk during the spring and summer. It is possibly related to FiQo-8. The site, on the basis of the projectile point base, dates ca 2000-3000 years ago.

Recommendation: None.

FiQo-10

Location: FiQo-10, a lookout/workshop, is located approximately 300 m northwest of the Willow Creek-Snake Indian River junction.

Description: The site is situated on an eroding, south facing, low valley terrace. The Willow Creek-Blue Creek Trail passes immediately
below the terrace. The terrace consists of a thin covering of alluvial silt and sand over gravels. Grass and conifers cover the site.

**Artifacts:** Thirty-five flakes were collected. Lithic types present are Glacier Pass siliceous mudstone (N=28), Nordegg (N=2), grey (N=2) and white (N=1) chert, and quartzite (N=2). The majority of the flakes are fragmentary. Three are bifacial production flakes, and the remaining are percussion retouch.

**Discussion:** FiQo-10 probably was a lookout/workshop. The terrace overlooks the Willow Creek-Snake Indian River junction as well as the adjacent meadows.

**Recommendation:** None.

**FiQo-12**

FiQo-12, a lookout/workshop, is located on the west side of and adjacent to the headwaters of Willow Creek.

**Description:** The site is situated on the eroding edge of a low valley terrace. Rising approximately 15 m above the Willow Creek floodplain, the terrace overlooks a large beaver pond. Grass and Jack pine cover the site area.

**Artifacts:** Three flakes and a broken arrow point (Pl. 14:D) of Glacier Pass Siliceous mudstone were collected.

**Discussion:** FiQo-12 was probably a small hunting related lookout/workshop dating within the last 1500 years.

**Recommendation:** None.

**FiQo-13**

**Location:** FiQo-13, a small workshop, is located adjacent to the Willow Creek-Blue Creek Trail approximately 1.5 km east of Mud Creek.
**Description:** The site is situated on a south facing, low valley terrace rising approximately 5 m above a small stream. The site is approximately 15-20 m south of FiQo-25. The terrace is composed of alluvial silt and sand over gravels. A Boreal Forest covers the site.

**Artifacts:** Twenty-one flakes of Glacier Pass siliceous mudstone were collected. The majority of the flakes are small percussion retouch flakes and/or fragments. Two were small decortication flakes.

**Discussion:** FiQo-13 was a small workshop site, perhaps where a single tool was manufactured or modified.

**Recommendation:** None.

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**FiQo-14**

FiQo-14 is a transitory campsite located on the north side of the Snake Indian River, approximately 250 m west of Clay Creek.

**Description:** The site is situated on an upper valley terrace some 30-35 m above the Snake Indian River directly opposite Grizzly Creek Meadows. The terrace is composed of alluvial silt and sand over gravels. Its margin is eroding into the river. Spruce and lodgepole pine cover the site.

**Artifacts:** Fifteen flakes and/or flake fragments of Glacier Pass siliceous mudstone (N=13) and quartzite (N=2) were collected. One is a pressure flake and the remainder small, percussion bifacial retouch flakes.

**Discussion:** Fire broken rock was noted within the site area. FiQo-14 probably was a small transitory campsite, probably related to FiQo-15 and FiQo-8.

**Recommendation:** None.
FiQo-15

**Location:** FiQo-15, a lookout/workshop, is located on the north side of the Snake Indian River approximately 250 m west of FiQo-14 and 500 m west of Clay Creek.

**Description:** The site is situated on the summit of a lateral moraine which grades into the upper valley terrace between FiQo-14 and FiQo-15. Rising approximately 80 m above the river, the moraine is covered with grass, spruce and lodgepole pine. This point has an unobstructed view of the south side of the Snake Indian River Valley.

**Artifacts:** Twenty-four Glacier Pass siliceous mudstone flakes or flake fragments were collected. The majority are bifacial thinning or percussion retouch flakes.

**Discussion:** FiQo-15 probably was a lookout/workshop. It may be related to FiQo-8 and 14.

**Recommendation:** None.

FiQo-16

**Location:** FiQo-16, a small workshop, is located on the north side of the Snake Indian River approximately 90 m west of the Willow Creek-Snake Indian River junction.

**Description:** The site is situated on the eroded edge of the lower (4 m) valley terrace. The terrace is composed of alluvial silt and sand over a riverine gravels. Grass with scattered spruce and lodgepole pine covers the site.

**Artifacts:** Three black chert and one Glacier Pass siliceous mudstone flakes were collected. Three of these display water rolled cortex; the other is a small percussion retouch flake.

**Discussion:** FiQo-16 is probably a very small workshop. It
may be related to the extraction of chert cobbles from the river or creek.

Recommendation: None.

FiQo-17

FiQo-17, a small workshop, is situated on the northeast side of the Deer Creek-Snake Indian River junction.

Description: The site is situated on the eroding edge of the lower valley terrace lying 5-8 m above the Snake Indian River floodplain. The terrace is composed of alluvial silts over gravels. It is covered with grass and mixed coniferous growth.

Artifacts: Three flakes and a utilized flake fragment of Glacier Pass siliceous mudstone were collected. One flake is a large decortication flake. The other two are small percussion retouch flakes. The blocky utilized flake fragment (Pl. 14:E) (length 3.6 cm, width 2.2 cm, thickness 1.7 cm, weight 1.4 gms). The wear is the result of a scraping motion away from the edge.

Discussion: FiQo-17, was probably a small workshop where possibly a single tool or preform was produced. It relates to activities at FiQo-18 or 19.

Recommendation: None.

FiQo-18

Location: FiQo-18 is a small workshop located on the north side of the Snake Indian River approximately 175 m east of FiQo-17.

Description: See FiQo-17.

Artifacts: Eleven flakes and/or fragments of Glacier Pass siliceous mudstone and one small grey chalcedony pressure flake were found. Two flakes exhibit rounded cortex. The remainder are small
percussion flakes.

Discussion: FiQo-18 is a small workshop site where possibly a single preform was modified into a biface. It is likely directly related to activities at FiQo-17 and 19.

Recommendation: None.

FiQo-19

Location: FiQo-19, a small campsite is located on the north side of the Snake Indian River approximately 350 m east of FiQo-18.

Description: Same as FiQo-16 and 17, except that the terrace is somewhat lower (5-7 m above the floodplain), and erosion is more extreme. A runoff channel and edge erosion have reduced the site area drastically.

Artifacts: A large quartzite flake, a small Glacier Pass siliceous mudstone flake fragment and a grey chert endscraper were collected. The endscraper was produced on a small decortication flake fragment (Pl. 14:F ) (length 2.2 cm, width 1.7 cm, thickness 0.7 cm, weight 2.4 gms). The proximal and left lateral edges resulted from fractures. Only the distal end is modified by pressure retouch producing a convex edge. The edge shows little wear. The face has some scalar retouch.

Discussion: Fire broken rock was noted along the eroded terrace face. FiQo-19 probably was a small transitory campsite. It may be related to other activities (FiQo-17, 18) along the same terrace.

Recommendation: None.

FiQo-21

Location: FiQo-21 is a lookout/workshop located on the east side of Deer Creek on the Glacier Pass (Little Heaven) Trail approxi-
mately 1.5 km northwest of the Glacier Pass-Blue Creek Trail junction.

**Description:** The site is situated on the highest point of an upper valley terrace eroded by Deer Creek. The site area has a light grass cover with mixed coniferous growth.

**Artifacts:** Twelve flake fragments were collected. Lithic types include Glacier Pass siliceous mudstone (N=4); quartzite (N=2); and grey banded (N=2), grey vitreous (N=2), white (N=1), Nordegg (N=1) cherts.

**Discussion:** FiQo-21 probably was a small lookout/workshop. It indicates Deer Creek was used as a route to Glacier Pass. FiQo-22, 23 and 24 may be related sites.

**Recommendation:** None

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**FiQo-22**

Location: FiQo-22, a small campsite, is located on the northeast side of Deer Creek along the Deer Creek-Little Heaven Trail approximately 1 km upstream from FiQo-21.

**Description:** The site, 200 square meters in area, is situated on an upper valley terrace which rises 40 m above Deer Creek. Grass and mixed forest covers the site.

**Artifacts:** Sixteen flake fragments and one endscraper were collected. Lithic types represented are Glacier Pass siliceous mudstone (N=13), quartzite (N=1) and brown (N=1) and white (N=1) cherts. Three flakes are hard hammer percussion fragments; remaining fragments appear to be soft hammer produced. The endscraper was manufactured on a triangular uniface fragment of grey-black argillaceous chert (Pl. 14:G) (length 3.8 cm, width 3.0 cm, thickness 0.6 cm, weight 7.3 gms). The proximal and distal edges are fractured, only the distal edge is modified by pressure retouch. The edge face is highly faceted and step
fractured indicating use on a hard medium.

**Discussion:** Firebroken rock was noted scattered along the trail within the site area. FiQo-22 probably is a small campsite, utilized as a stopping point along the Deer Creek-Glacier Pass route. Related sites may include FiQo-21, 23 and 24.

**Recommendation:** The site is of further value. Limited testing is recommended to establish age and cultural affiliations.

**FiQo-23**

FiQo-23 is a small workshop located on the northeast side of Deer Creek on the Deer Creek-Little Heaven Trail to Glacier Pass, approximately 100 m west of FiQo-22.

**Description:** The site is situated on the upper valley terrace edge adjacent to the Deer Lake discharge stream. The 5 m terrace is composed of alluvial silt/clay. Grass with open poplar and spruce trees characterized the site area.

**Artifacts:** Five Glacier Pass siliceous mudstone flakes, and 1 white chert flake fragment were collected. All were percussion produced.

**Discussion:** FiQo-23 probably is a small workshop directly related to activities at FiQo-22.

**Recommendation:** None.

**FiQo-24**

**Location:** FiQo-24 is a small workshop located on the northeast side of Deer Creek on the Glacier Pass trail (to Little Heaven), approximately 100 m west of FiQo-23 where the trail crosses the Deer Lake discharge stream.

**Description:** The site is situated on a stream terrace imme-
diately above the Deer Lake exit stream. The alluvial silt and clay filled terrace is covered with grass, poplar and spruce.

Artifacts: Nine Glacier Pass siliceous mudstone flakes and/or flake fragments were collected. The complete flakes (N=2) were produced by hard hammer percussion. The remaining flake fragments were likely soft hammer percussion produced.

Discussion: FiQo-24 probably was a small workshop. It is the last site on the Deer Creek-Glacier Pass route until the Upper Mowitch Creek Valley (Little Heaven). FiQo-22 and 23 are probably related sites.

Recommendation: None.

FiQp-1 (Pl. 9B)

FiQp-1 is a campsite located in the Upper Mowitch Creek Valley on the south side of Mowitch Creek, approximately .75 km north-northeast of the Little Heaven Warden's cabin.

Description: The site, ca 600 square meters in area, is situated on a deflated, north-south esker, approximately 75 m from Mowitch Creek. The esker is composed of 5 cm of sod and black silt, and 5 cm of red silt above glacial gravels. Limited testing in 1971 established that a single component is 5-7 cm below surface.

Artifacts: Seventy-four flake fragments of Glacier Pass Siliceous mudstone were recovered. They represent core or preform reduction to produce a single biface.

Discussion: FiQp-1 is probably a small campsite, and another link in the Glacier Pass-Deer Creek route to the Snake Indian Valley. It probably relates to other sites along the route (FiQo-22, 23, 24 and FiQp-4; and the Glacier Pass complex).
**Recommendation:** The site is of value. Extensive testing is recommended to establish its age and cultural affiliations.

**FiQp-3**

**Location:** FiQp-3 is a small campsite located approximately one kilometer west of the Welburne Warden's cabin on the Blue Creek Trail.

**Description:** The site, ca 200 sq. meters in area, is situated on an eroded, upper valley terrace edge. The terrace rises approximately 30 m above the river. It is composed of alluvial silt and sand overlying glacial gravels. Conifers characterize its surface.

**Artifacts:** A biface fragment and six flake fragments were collected. Lithic types represented are black (N=1), white (N=1) and grey banded (N=1) cherts; quartzite (N=2) and Glacier Pass siliceous mudstone.

The quartzite biface fragment is the midsection of a leaf-shaped biface (Pl. 14:1). Shaped by direct percussion, the ventral surface is marked by numerous step fractures, with the greatest concentration along the left lateral edge. The biface has a thick cross section, presumably having been re-sharpened at least once.

**Discussion:** FiQp-3 was likely a small campsite, perhaps related to larger base camps down the Snake Indian River (FiQo-8). Activities of the camp probably centered around hunting in the Upper Snake Indian Valley.

**Recommendation:** None

**FiQp-4**

**Location:** FiQp-4 was an isolated find located approximately .75 km north of the Little Heaven Warden's cabin on the Glacier Pass Trail, approximately 150 m northwest of FiQp-1 on the Upper Mowitch Creek.
Description: The site is situated on the "nose" of a stream eroded deflated esker. The esker is composed of brown silt over glacial gravels. It is covered with grass and scattered willows.

Artifacts: A single, siliceous mudstone retouched flake was collected (Pl. 14: H ). It is a soft hammer percussion bifacial thinning flake, hinge fractured at the distal end. Both lateral edges are marginally retouched and exhibit edge reduction and wear.

Discussion: FiQp-4 is an isolated find probably related to activities at FiQp-1.

Recommendation: None.

FiQq-2

Location: FiQq-2 is a small workshop located on the north side of the Snake Indian River, approximately 2.5 km west of the Blue Creek Warden's station on the Snake Indian Pass Trail.

Description: The site is situated on a recessional moraine, approximately 3 m above the Snake Indian Floodplain. The moraine is composed of a shallow layer of silt and sand overlying glacial gravels. Grass and scattered conifers cover the site area.

Artifacts: Forty-nine Glacier Pass siliceous mudstone flakes and flake fragments, and one large quartzite decortication flake were collected. The Glacier Pass siliceous mudstone material likely constitutes the complete debitage resulting from the manufacture of a single biface. The flakes are percussion produced and include bifacial thinning and retouch flakes.

Discussion: FiQq-2 is a small workshop site. Flake size and production is similar to the Glacier Pass complex.

Recommendation: None.
FiQq-20

Location: FiQq-20 is a small workshop located approximately 35 m east-southeast of the Jasper Park Boundary cairn in Glacier Pass.

Description: The site is situated on a small knoll approximately 15 m above the valley floor. The knoll consists of colluvial deposits of silt and shale covered with grass and lichen.

Artifacts: Nineteen Glacier Pass siliceous mudstone flakes and flake fragments were collected. The assemblage includes large decortication flakes, core rejuvenation flakes and primary percussion flakes, resulting from core reduction and preform manufacture.

Discussion: FiQq-20 is a small workshop site directly related to the Glacier Pass quarry activities (see Appendix 1)(Pl. 9A).

Recommendations: None.

FiQq-21 (Pl. 9A)

Location: FiQq-21 is a small workshop located approximately 50 m south of the Jasper Park Boundary cairn in Glacier Pass, approximately 25 m north of the small lake in Glacier Pass.

Description: The site is situated on a small knoll overlooking the north end of Glacier Pass Lake. The knoll consists of colluvial silt and shale covered with grass and lichen.

Artifacts: Three Glacier Pass siliceous mudstone flakes were collected.

Discussion: FiQq-21 is an extension of the Glacier Pass quarrying activities.

Recommendation: None.

FiQq-22

Location: FiQq-22 is a small workshop site located at the
Jasper Park Boundary cairn in Glacier Pass.

**Description:** The site lies on the floor of the Pass which consists of colluvial silts over shale. The site area is covered with grass and lichen.

**Artifacts:** Twelve Glacier Pass siliceous mudstone flakes and flake fragments were recovered. The flakes were percussion produced during core reduction.

**Discussion:** FiQq-22 is another small workshop site associated with the Glacier Pass quarry activities.

**Recommendation:** None.

**PREHISTORY**

Jasper's prehistory is based on artifacts left behind by the various Native Peoples who utilized the Park over the past 10,000 years or more. These data indicate various cultural historical relationships through time with adjacent areas of the Northern Plains/Rocky Mountains; the Fraser Plateau to the south and west, and the Boreal Forest to the north.

Documentation of prehistory requires extensive excavation of a series of sites dating through time in order to recover artifacts in proper stratigraphic association and obtain dates on the various cultures. In addition information is needed on past environments. The present data collected from the surface, permits by study of projectile point types (Appendix 2) and certain lithics (Appendix 4), a brief glimpse of the past Native peoples who frequented the Jasper area. These are discussed within the time framework of three major prehistoric periods defined for the Northern Plains/Rocky Mountains (see Glossary).

This data, as discussed below, indicate peoples of varying cultural
affinities exploited the Jasper Park area through time. It should be noted that this exploitation was sporadic and probably not overlapping. Comparative data for the following discussion is primarily from the mountainous south where considerable research has been done. Research in the forests and Peace River block is limited, as is that in the adjacent sections of the Fraser Plateau in British Columbia.

EARLY PREHISTORIC PERIOD (> 7,500 years ago)

Geological data discussed in Chapter 2 suggests the lower Athabasca Valley east of the Front Range has been deglaciated for over 15,000 years. By 11,000 years (Pindale III times) the ice in the Athabasca Valley stood in the townsite area, subsequently receding to Athabasca Falls by 8000 years ago.

Environments during these early times, particularly before 10,000 years ago, would be the controlling factor in man's first penetration into the valley. No doubt sheep, caribou and other ungulates were present by 10,000 years ago in the deglaciated areas.

The first human penetration of the valley by man is represented by the appearance at sites FhQk-3, outside the park, and FgQm-6 at the head of Jasper Lake, of Plainview projectile points, which elsewhere data ca 8000-7000 B.C. Other point types dating in the early period include Alberta (8000-6500 B.C.) from FgQm-6, Agate Basin (8000-6000 B.C.) and Lusk (6500-5500 B.C.). The latter two types are of unknown provenience from the Bried Collection.

These point types used on the throwing or stabbing spears, are found throughout the Northern Rocky Mountains and adjacent Plains, the East Kootenay and north into the Peace River area. They indicate the Park area was exploited by peoples moving into the valleys from adjacent
areas on the eastern slopes. In Jasper they frequented the foothills and front range area at least as far upstream as the head of Jasper Lake.

The Pinedale IV ice advance, dating 6500 - 6000 B.C., probably created a radically different environment. During this time in the Southern Alberta Rockies the upper timber line was depressed at least 600 m, temperatures were 3-4°C and precipitation values doubled. However in spite of this environment change, peoples flourished in the Northern Rocky Mountains to the south (Reeves 1974a, b); and probably in Jasper as well.

MIDDLE PREHISTORIC PERIOD (5500 B.C. - A.D. 400)

The Middle Prehistoric Period begins with the appearance of cultures utilizing the atlatl or spear thrower in the Northern Rocky Mountains. It ends with the introduction of the bow and arrow. Environments changed once again with the occurrence of the Altithermal (Atlantic) climatic episode which lasted until ca 3000 B.C. During this time winter temperatures were milder, there was less snowfall and open valley bottom habitats expanded. After 3000 B.C. the climate deteriorated, and it is marked by a series of alpine ice advances.

The atlatl projectile points recovered from the Park area are a mixture of known and unknown types. Types known for the Northern Rocky Mountains/Plains to the south include Bitterroot, Oxbow, Hanna, Pelican Lake and Besant. Some of these also occur in the Parklands and Peace River area. Unnamed types include three stemmed and one corner notched variety. Literature searches suggest they have Northern Boreal Forest and Fraser Plateau affinities; indicating penetration of the area during this period of peoples of Boreal and Plateau origins. The latter people presumably would be using the transcontinental divide passes
of the Columbia and Fraser valleys.

The obvious cultural influences observed in the projectile point types may reflect changing environmental patterns. Perhaps during the Altithermal the Park area was frequented by people of Northern Plains/Rocky Mountain affinity, who were, with the beginning of the Neoglaciations, replaced by peoples of Northern Boreal/Cordilleran affinity, adapted to the more closed environment. The Plateau influence is secondary and may occur at the close of the period. It seems to have been very minor at this time. During this time the Glacier Pass Quarry complex and route was first used, and the Snake Indian-Willow Creek area occupied.

While the various projectile point types indicate varying penetration and use of the Park, the Pelican Lake Corner Notched type (ca 1000 B.C. - A.D. 400) seems to be most widely distributed, occurring at Athabasca Falls (FdQl-1), the Patricia (FfQm-6) and probably the Pyramid Lake (FfQm-5) sites; and in the Snake Indian River Valley probably at FiQo-9. The distribution suggests a wide ranging group who perhaps more effectively exploited the intermontane region than previous peoples. Pelican Lake points are also very common in Banff, Crowsnest and Waterton, suggesting perhaps they represent a very well adapted Cordilleran people. Their projected time of occupancy correlates in part with the second Neoglaciation when alpine zones, and therefore, summer ranges were expanded.

The Glacier Pass-Snake Indian area may have been exploited by two culturally unrelated groups. The Pass initially was used by Northern Boreal/Cordilleran adapted peoples as suggested by the lithic and point type distributions. Subsequently the area was penetrated by those utilizing the Pelican Lake points, either north from the Athabasca or west from the Wildhay.
LATE PREHISTORIC PERIOD (A.D. 400 - A.D. 1850)

This period begins with the introduction of the bow and arrow into cultures in the area. It ends with the acculturation of the Native People during the fur trade. A number of arrow point types were recovered from the Park area. While more common than earlier atlatl points, this does not necessarily indicate more frequent occupation of the Athabasca Valley during these latest times. It probably only reflects differences between atlatl and bow and arrow systems in hafting and value of projectile points, and the more frequent occurrence of sites of this age due to preservation of land surfaces.

Like earlier times the point types indicate cultural contact/relationships with the Northern Plains/Rocky Mountains in forms such as Plains Triangular; Plains, Prairie and Timber Ridge Side Notched; and with Interior B.C. with Plateau Side Notched, and unnamed types of Northern Boreal/Cordilleran affinity. The presence of Plateau Side Notched points manufactured from B.C. basalt, probably represent the Shuswap peoples of terminal prehistoric times. They indicate a movement via the Yellowhead/North Thompson to and from the Shuswap-Kamloops area. The presence of flakes of Anihiem Lake (B.C.) obsidian and microblades from the same site (FiQk-4) indicates movement via the Yellowhead/Fraser route between the central Plateau and the eastern slopes.

The relative frequency of the various point types combined with other data suggests the Northern Boreal/Cordilleran and Fraser Plateau influences are more important than those from the Northern Rocky Mountains to the south. Prehistoric Kootenai artifacts, which are identified from the North Saskatchewan area to Waterton, are absent in Jasper. The Jasper assemblage suggests perhaps an indigenous group,
related to Northern Boreal Interior Plateau/Cordilleran peoples, were exploiting the Park area. These groups were adapted to the Cordilleran environment.

SUMMARY

The preceding discussion has briefly outlined the prehistory of the Park region, as reflected in projectile point types of known and unknown cultural affinity, and certain lithic types of known source area. This data suggests the lower reaches of the Athabasca Valley has a sporadic use history extending back some 10,000 years to when the Athabasca Valley Glacier stood in the Jasper Townsite vicinity. Peoples who occupied the valley during these early times moved in from the eastern slopes. These people were culturally related to other groups of the Northern Rocky Mountains.

Peoples of these traditions may have continued to frequent the area until around 5000 B.P. when climatic changes resulted in the appearance of Northern Boreal/Cordilleran peoples adapted to the new environment. First evidence of the use of the Snake Indian-Willow Creek and Glacier Pass quarry complex occurs in this time. Later influences from the Fraser Plateau appear.

This pattern continues into the Late Prehistoric Period when arrow points appear in the sites. Most styles seem to relate to Northern peoples. One type, Plateau Side Notched, probably represents Shuswap penetration of the area in the late 1700's.

In sum, Jasper's prehistory is made up of varying influences and cultures moving in and out of the area in response to changed environmental and cultural parameters. Settlement was probably sporadic and non-overlapping. The more detailed study of these past cultures must await excavated data.
PREHISTORIC LAND AND RESOURCE UTILIZATION PATTERNS

Past Native land and resource utilization patterns in the Jasper Region have no doubt varied through time in response to changing environmental conditions, ungulate populations, Native cultures and their exploitive technology. While chronologically controlled archaeological and environmental data from a number of archaeological sites is required before patterns can be delineated in any detail, the site inventory data, combined with historical information, allow for some discussion of Native use patterns.

SITE PATTERNING

Site and lithic type distributional data indicates two spatially separated site patterns, one related to the Athabasca, the other to the Snake Indian -Willow Creek-Glacier Pass area. Within each of these areas 2 variables are important (1) the distribution of suitable landforms for camping activities (well drained, open aspects, south-south east exposures, adjacent to water, wood and shelter), and (2) the areas of maximum seasonal ungulate carrying capacity.

In Jasper the two variables overlap considerably, resulting in the spatial structuring of settlement to the two separate valley systems, as sites were not found in other valleys.

ATHABASCA VALLEY

The Athabasca Valley pattern has two "site clusterings", the section between Jasper Townsite and the De Smet and Jacques Ranges; and the valley section east of the front range (Map 2). The location of sites in the former area seems to be largely determined by the availability of suitable landforms for occupancy, and nearness of ungulate resources for utilization. Campsites are situated on relatively dry, open surfaces
with eastern to southwestern exposures on either the east or west side
of the Athabasca River, above the De Smet-Jacques ranges.

Below these ranges the Athbasca River bends to the northeast. Campsites do not occur again until it enters Brule Lake. Sites above Brule Lake consist of lookouts and workshops (N=7) or isolated artifact finds, located on promontories and elevated locales, adjacent to the river. These sites indicate transitory use of the area as a travel route or for hunting. The lack of camps in the area below the upper end of Jasper Lake probably reflects both the nature of the Athabasca floodplain and the local prevailing weather conditions.

The floodplain is broad, and the river unrestricted, characterized by lakes, shifting channels, sand dunes, and broad expanses of seasonally exposed alluvial silts and sands. These areas are unstable and not likely to be used by native peoples, who preferred higher surfaces. The latter areas are generally absent in this section. The unstable areas are characterized by frequent and violent sand storms and are aptly described by Sir James Hector in 1858.

"Above the fort (Jasper House II) the river dilates into large shallow lakes, along the shores of which are piled great sand hills. The wind generally blows in this valley with great violence, and often in the course of a few hours, everything is covered many inches deep with sand". (Spry 1968:370)

The valley from the junction of the Miette with the Athabasca to the upper end of Jasper Lake is characterized by relatively snow free winters, and Chinook winds. These factors, coupled with open meadows and wintering ungulates, would in combination with the suitable site locales mentioned earlier, make it suitable for fall-spring use by Native peoples. It was occupied historically in the winter and sites such as FqQm-6, 12 and FfQm-9 may have been winter camps at sometime
in the past. Thirteen sites, nine of which were campsites, were found, indicating the settlement preference for the area.

Site frequencies drop off markedly upstream from the Miette junction. Only one campsite at Athabasca Falls was found. This low occurrence reflects lower ungulate carrying capacities and the more closed forest environment. These areas would be used as transitory camping places between winter, spring and summer ranges by Native peoples, or for overnighting during crossing of the Athabasca or Whirlpool passes, as indicated by the isolated find on Scott's Flats. While no use of the Miette/Yellowhead was found, the presence of lithic materials from the Interior Plateau indicates it was used.

East of the mountain front some thirteen campsites were found associated with dry locales having south to southwesterly exposures, situated on tributary streams at or above their junction with the Athabasca. The sites are larger in size and higher in artifact yield, suggesting both larger population units and more frequent use than those up valley. The area would be amenable to winter occupations as it would profit by the winter Chinooks but not be subjected to the violent storms and winds characteristic of the valley above. From here the winter ungulate ranges of the foothills, front range and mountain valleys could be effectively exploited -- the latter particularly, by dogsleds on the winter ice.

**SNAKE INDIAN-WILLOW CREEK-GLACIER PASS**

Prehistoric sites were not found in the Snake Indian between Willow Creek and the Athabasca Valley. While their lack suggests little use of the area, movement did occur as indicated by the presence of Glacier Pass Siliceous mudstone in the Athabasca Valley at sites such as FgQm-6.
In the Snake Indian Valley the greatest concentration of sites occurs between Willow and Deer Creeks. Upstream (from Deer Creek) and downstream (from Willow Creek), the site frequency drops off markedly, suggesting the area between the two creeks met the necessary prerequisites for settlement and ungulate resource exploitation. This region is characterized by open meadows and grasslands, and varying ungulate species range here year round. Carbyn (1972) notes that elk, which summer in the area, in the main migrated out of the region during the first week in November, returning in April. Moose and mule deer, and to a lesser extent caribou, remained in the area during the winter months, returning to higher elevations during the summer. This pattern, which would have included wood bison in the past, could provide year round exploitable ungulate resources, and allow winter use of the area by small groups of Native peoples.

Winter use, if present, would be similar to that reflected in historic Native sites. These consisted of one or two families, hunting and trapping in the area. One to three tipis are found along a stream or river terrace. Summer use could be represented also at these sites, or at larger camps, e.g. FiQo-4 and 8. The latter would provide a base for hunters to exploit adjacent meadows and higher slopes. A specific use pattern, beginning in the Late Middle Prehistoric, ca 1000 B.C. (?), composed of base camps, smaller hunting camps, lookouts and workshops seems to characterize the area. The camps, at this time, have fire cracked rock in them. While low in frequency, it is more common than in the Athabasca Valley sites.

The Willow Creek area also had other characteristics which made it preferred to other valleys. While Blue Creek, for example, has extensive meadows, no prehistoric sites were found. The Willow Creek area was approached by two routes -- one via the Glacier Pass, along the Upper
Mowitch Creek to Deer Creek; and the other via the Wildhay River through Rock Lake, Rock Creek Valley to the Willow Creek headwaters. The latter route provided a year-round access between the foothills and the Snake Indian. Low in elevation, it could easily be traversed, particularly in winter when the water and wetlands were frozen.

Glacier Pass was an activity loci centered around the extraction of siliceous mudstone nodules, from the till and alluvial outwash deposits, to produce tools and transportable bifacial core/preforms (see Appendix 1). Three sites near the junction of the North and South Sulphur Rivers indicate movement to the Pass was likely up the Sulphur River from the Smoky River. Sites in the Upper Mowitch Creek Valley and the series of sites along the east side of Deer Creek are all of a temporary nature, suggesting stays were short until the lower valleys either side of the summit were reached. Utilization of this route was likely restricted to the snow free summer and fall seasons. Considerable snow accumulation and retention occurs during the winter and spring months.

GROUP SIZE AND SUBSISTENCE

Site distribution and settlement patterning is tied directly to the location of suitable locales for camping, which defines the specific area selected and the seasonal availability, abundance and ease of access to capture various ungulates. It is these environmental/availability factors which give an overall structure to the seasonal round of activities and camps.

Sites inside the Front Range are in general relatively small in area, containing few artifacts, cultural refuse or preserved faunal remains. Tools in many sites consist of those associated with the hunting
(projectile points) and butchering (bifacial knives, flakes) of ungulates. Tools and debris representing hide processing and other more stationary activities are uncommon, and found only in a few sites. In contrast, east of the Front Range on the Athabasca, the sites are larger, and contain a range of tools, plus highly macerated bone, derived from bone boiling and grease preparation. This suggests more stable, and longer term camps.

Camp size and contents of most sites west of the Front Range suggests small bands of one or two nuclear families similar to those of the historic Native peoples were the norm. As noted in Chapter 3, peoples such as the Iroquois or Stoney, who elsewhere had more complex organizations, quickly adopted this group size which was flexible and better adapted to the environmental limitations of the Jasper area. These prehistoric groups no doubt banded in larger groups during the seasons of resource abundance.

Subsistence strategies would be seasonally structured. Small family groups would move into the higher valleys in summer, as the snow line retreated and game moved upwards, followed by a return to lower valleys with the onset of winter. This pattern would be complex because of the presence of ungulates with diverse habitat preferences, and overlapping summer-winter ranges, thereby potentially providing opportunities for multi-season exploitation.

Ungulates prehistorically, as historically, would be the major nutrient source, supplemented by small game, waterfowl, fish perhaps, and plants in season. Preferences would be based on both availability and ease of capture; and taste. Methods of capture would be similar to those of historic times, based on individual or small group co-operation. Evidence of communal kills was not found.
SUMMARY

Past Native peoples' use of the land and its resources in Jasper as elsewhere in the Northern Rocky Mountains was closely tied to the seasonal behaviour of the ungulates on which they subsisted, and the suitability of landforms for man's domestic activities. Man's use of the area, as reflected in the non-perishable remains left behind of his activities, is therefore a particular expression of the constellation of biophysical variables of any one valley system.

Prehistoric patterns may vary significantly within and between valleys, as seen in the differences observed between the Athabasca Valley and the Snake Indian in prehistoric use, or those in the Athabasca Valley itself. These differences in site location, and size, reflect the interplay between Man, mammal, climate, vegetation and physiography and changing cultural and ecological patterns in response both to past climatic and cultural shifts. The further delineation of patterns suggested in the preceding chapter must await the acquisition of excavated time controlled archaeological and paleoenvironmental data.
The archaeological inventory identified 18 historic and 50 prehistoric sites in Jasper National Park. Some of these sites are of further value. Resource management should involve both conservation and development of the archaeological sites of value. Conservation may consist of either protection of the site from further erosion of its values by site preservation, or if site impairment cannot be avoided, archaeological excavation to recover site values. Development of the resource should include both on-site development if feasible, for public interpretation and appreciation, and excavation of sites to obtain interpretive data.

These two management objectives are mutually inter-related. Areas of high visitor use/facility development often coincide with archaeological sites which are of value for interpretation. These sites are often severely impaired by past and present land use, and cannot easily be conserved in place. The data derived from their excavation must be analyzed and interpreted. However, to properly interpret such data, it must be integrated with information derived from other sites not subject to impairment.

In sum, an effective archaeological resource management program should include both impact mitigation by site excavation, and site excavation and development for interpretive purposes. The following sections discuss the present state of site impairment, sources of continued impact, site values, recommendations for further study, and suggestions for interpretive development.
HISTORIC SITES

In the course of the prehistoric site inventory, 18 historic sites were located (Table 1). These sites, which relate to the fur trade, settlement and Native use of the Park, are discussed separately. With the exception of the fur trade sites, they represent a sampling of historic sites in the Park.

FUR TRADE SITES

Two sites relate directly to the fur trade, the second Jasper House (FgQ1-1), and the probable location of Laroque’s House (2nd Henry House, FfQm-1). These sites are the only two fur trade posts remaining in the Park area. Both the first Jasper House and the first Henry House are destroyed. The former, located on Brule Lake, was destroyed by the Canadian National Railway, and the latter by the Jasper Park Lodge development.

Jasper and Laroque’s Houses are of outstanding local and regional value. Jasper House is of National significance. Jasper National Park is the only western park which, to our knowledge, contains sites of the fur trade era. Both sites are fragile, and easily subject to impairment. Jasper House has been vandalized to a limited degree by souvenir hunters, and Laroque’s House by a local industry. They could easily and quickly be destroyed by vandals.

For both sites we recommend that (1) they be included in regular warden patrols and kept under close scrutiny to check any on-ground vandalism, (2) no change in land use or further impairment be permitted at either site, and (3) that they both be excavated and interpreted, with on-site development at Laroque’s House.
SETTLEMENT PERIOD SITES

These sites consist of the still standing log residences of the John (FfQm-1) and Ewan (FgQm-4) Moberly families, the building remains of Adam Joachim's residence (FgQm-6) and four other cabin remains of unknown historic association. Two of the latter (FeQl-1, FgQl-2) may date to the fur trade, a third (FgQm-2) to 20th century railway construction, and a fourth (FgQm-9) to late 19th century, early 20th century fur trapping. These, except the standing structures, represent only a sampling of sites of this period in Jasper.

All of these sites are of value. They reflect various parts of the settlement history of the Park. Like the fur trade sites, they are fragile and susceptible to vandalism by collectors in search of bottles and other artifacts. No doubt they will eventually be vandaled, and in the process, important information will be destroyed. A further site of the settlement period, Moberly's Athabasca Depot of 1870 (FfQm-10) was destroyed by barrow pitting and is of no further value.

The standing buildings of the Moberly families, we recommend for restoration as required, and Joachim's house remains for excavation to obtain a sample of period artifacts and other data useful in interpreting this period of Park history. For the other four sites of unknown historic association, we recommend a program of mapping and testing to determine site age and historical value. If of value, further studies may be required.

NATIVE AND METIS SITES

Five potential or known crib burials and three tipi frame sites were recorded (Table 1). All except one (FgQm-10), are in the Snake
Indian-Willow Creek area. No doubt other such sites exist in the Park.

These sites represent a specific Native use pattern in the Park. They are in varying stages of decay. Some we recommend for more detailed study, both to preserve their record and obtain further information for the interpretation of the Native Peoples' role in the Park. The crib burials are isolated and therefore should not be subject to vandalism by those with morbid curiosity. Burial associations should be determined for those of questionable status, and the deceased identified if possible through informant interviews.

DEVELOPMENT AND INTERPRETATION

Jasper's historic resources consisting of sites, documents, informants and other records have both considerable value and interpretive potential. As the first stage in their management and interpretation, we recommend a comprehensive field inventory be made to locate and evaluate settlers' cabins and other structures identified in the historic records, railway construction camps, the remains of the Pocahontas development and other standing structures of early vintage, dating to the early years of the Park. This field inventory, we further recommend, be accompanied by informant interviews, and archival and record searches as required to identify the sources and value of historic data relevant to sites within the Park. Once such is completed, more specific recommendations can be made for historic site interpretation and development.

The second Jasper House and Laroque's House are of outstanding value. We urge they be regularly patrolled and protected until they can be developed. Neither of these sites, nor any other sites should have interpretive or commemorative signs erected until all archaeological
studies are completed.

The early history of Jasper as evidenced by its extant historic sites could be developed through select excavation, restoration and stabilization, on-site exhibits and interpretive writing. Laroque's House would be an ideal location for a historically oriented visitor development. Prehistoric data could also be integrated.

Jasper is unique among the Rocky Mountain Parks in its historical resources. The Athabasca Valley is the only valley which has a history of settlement and fur trade extending back to the early 19th century. The valley played a major historical role in Western Canadian history. It is of National significance.

PREHISTORIC SITES

ATHABASCA VALLEY

Twenty-three prehistoric sites were found in the Athabasca Valley (Table 2). These consisted of four isolated artifact finds, seven workshops and lookouts, one cave and eleven campsites. Of varying value, the sites are differentially impacted by land use and natural factors.

The isolated finds represent random locales where an artifact or tool was lost or discarded. They are of no further value. Their values were retrieved in the location and recovery of the artifact. The workshops and lookouts are all small sites and with the exception of FgQm-14 are of no further value. Two were wind deflated and one destroyed by the Trans Mountain Oil pipeline. We recommend test excavations at FgQm-14.

The Devona Cave (FhQm-1) is unimpaired and of major value. It could be subjected to vandalism. The cave, while it may have limited prehistoric cultural potential, could contain considerable paleo-
environmental data. It is one of the few, low elevation caves known in the Northern Rocky Mountains. We recommend test excavation to determine its potential.

The 11 campsites range widely in impairment and value. All are impaired to some degree. Three are subject to river erosion, and four to wind deflation. Eight sites are impaired by road and highway construction; FdQl-1 (Athabasca Falls) was impaired by the Banff-Jasper, three sites were obliterated and one impaired (FgQm-1, Cold Sulphur Springs) by Hwy 16, two other sites (FfQm-5, 6) are impaired by the Pyramid/Patricia Lake road networks, and one (FgQm-6) by the Celestine Lakes Road. Trans Mountain Pipeline construction also impacted FgQm-6. Two sites (FdQl-1, FfQm-2) are subject to foot/vehicle traffic.

Multiple impact occurs on three sites: FdQl-1 at Athabasca Falls, subject to river erosion, is partially destroyed by road construction and foot and vehicle traffic; FgQm-6, the early site at the south end of Jasper Lake, is subject to wind deflation and it is also bisected by the pipeline and the Celestine Lakes Road; FfQm-2, at the Athabasca-Miette junction, is subject to visitor use and also river erosion.

Site values range widely. The three sites (FfQk-1, FfQm-4, 9) destroyed by highway construction have no remaining physical values. FfQm-2, subject to river erosion, has also lost its values. The remaining seven sites, while impaired to varying degrees, are considered of sufficient value that we recommend test excavations to determine if they still contain data of value which could be recovered through more extensive excavations. In the instance of FfQm-5 (Pyramid Lake outlet), FfQm-6 (near Patricia Lake) and FgQm-1 (Cold Sulphur Springs), all impaired to some extent, such excavations would determine if intact areas remain which could yield further data. FdQl-1 (Athabasca Falls),
in a continuous state of impairment, requires similar studies. The other two sites (FgQm-6, 12) are undergoing wind deflation. They also require testing to ascertain if intact areas still exist.

In sum, we recommend for seven of the 11 campsites found in the Athabasca Valley, a program of test/excavation to evaluate their potential for yielding further data of value. This evaluation program would assess site capabilities and permit the formulation of management strategies for those found to be of further value. These seven campsites are essentially the remainder of the known Prehistoric data base for the Athabasca Valley. They will continue to degrade through time.

Athabasca Valley prehistory is a limited and scarce resource in comparison to mountain valleys in the south. While limited in its data capability, it is of value as the biophysical potential of this valley was such that the prehistoric Native pattern in it differed significantly from those further south. These patterns are unique in the Rocky Mountain National Parks.

SNAKE INDIAN-GLACIER PASS

Twenty-seven prehistoric sites were located in this low use area (Table 1). They consist of one isolated find, seventeen lookout or workshop sites, and nine campsites. The sites are relatively unimpaired. The major source of impact is from horse traffic. However, limited terrace slope and river bank erosion also occurs.

The sites represent a specific use pattern of the northern portion of the Park. Most are small and their values in interpreting this pattern were retrieved during the inventory. Five sites are of further value. Four campsites (FiQo-3, 4, 22 & FiQp-1) are recommended for test excavation to determine data yield potential, age and cultural
affiliation. One, FiQo-8, a large campsite, is recommended for extensive excavation.

The Snake Indian-Glacier Pass sites do not present a management problem relating to visitor use or natural erosion. Horse traffic is the only significant source of impairment, and does not have a high negative impact. Further management studies of these sites would be for interpretive purposes only. The Snake Indian pattern is uniquely different than the Athbasca. We recommend its further study.

DEVELOPMENT AND INTERPRETATION

The southeastern part of the Park remains to be inventoried. We recommend that the Brazeau-Southesk drainages be covered. This area should have a distinctive use pattern.

The 1970-71 inventory was areally extensive and based on finding surface materials or exposures. While intensive in certain areas, it probably did not locate all extant sites in Jasper, particularly those lacking exposures. We recommend that any area planned for terrain modification be checked by a professional archaeologist prior to development.

On the basis of the data on hand, discussed in the preceding chapters, we recommend a program of site test excavation to further evaluate the interpretive potential of sites in the Athabasca Valley; and a program of site testing and excavation for interpretive purposes, for the sites in the low use Snake Indian-Glacier Pass area.

The prehistoric data collected during the inventory, and interpreted in this report, is suitable for development of a static exhibition and slide program on past Native peoples' use of the Park environment. The collected cultural historical data is not sufficient for more than a conjectural interpretation of the Park's culture history.
The archaeological resources of Jasper National Park relate to both Native peoples who frequented the area for the past 10,000 or so years, and the European and Metis settlement of the valleys within the last 150 years.

Historically, the Native people and their mixed blood descendants are represented by tipi frames, cabins or the remains thereof, and crib burials -- all of perishable nature. Sites of the prehistoric past include lookouts, workshops and campsites, where tools were fabricated, game was watched and carcasses processed. All that remains today of these and other prehistoric activities are a few scattered broken or discarded tools, scrap bone and rock from their fires.

The Athabasca Valley played a vital role in the fur trade in historic times. It was central to the success of the Columbia fur enterprises of the Northwest and later the Hudson Bay Company. Sites such as the second Jasper House and Laroque's House relate to these early times. As a consequence, settlement took root in the Valley long before other areas of the eastern slopes, which remained closed to traders until the 1850's. This settlement is reflected perhaps in some of the cabin sites, and the Moberly families' still standing log cabins.

Jasper's prehistoric past is characterized by small groups of Native peoples of diverse cultural origin, represented in historic times by groups such as the Sekani, Stoney, Sarci, Iroquois, and Shuswap, and in the past by peoples whose material culture was similar at times to the mountainous south, north, or west. Changing environments probably played a important part in influencing both the type of culture present and its land and resource utilization patterns. The latter we have
suggested are primarily controlled by seasonal ungulate distribution and suitable camp loci.

In sum, Jasper has its own unique history and prehistory, reflecting both its environment and geographical position. These combine to give a definite character and value not found elsewhere in the Northern Rocky Mountains. This value, as represented in the historic and prehistoric sites, is a fragile resource. In many instances, these sites intersect with contemporary visitor use and facility development, and their individual values are depleting yearly. Historic values are particularly sensitive to destruction by souvenir collectors.

In order to manage these heritage values, we recommend a program of site protection, development, and interpretation to preserve their values in one form or another and to return them to the people of Canada in an interpreted form.
APPENDIX 1
PREHISTORIC SITES ADJACENT TO JASPER NATIONAL PARK

During the course of the archaeological inventory areas adjacent to Jasper National Park were investigated, and archaeological sites recorded. In 1970 the reconnaissance of the Athabasca Valley was extended east to the vicinity of Hinton, Alberta, in order to gain a more complete understanding of the prehistoric patterns within the Park. Twelve sites were located (Elliott 1970-71). In 1971 during the reconnaissance of the northern reaches of the Park, 17 sites were located in the Glacier Pass-South Sulphur River headwaters, and three adjacent to Brewster's Wall, 9.6 km downstream on the South Sulphur. In the same year two sites were recorded in the Rock Creek area, and six sites in the Wildhay River-Jarvis Lakes area, between the Grande Cache Highway and Rock Lake.

These sites are in large measure an integral part of Jasper's prehistory, particularly the Glacier Pass Quarry complex and the Athabasca River sites. These two groups are discussed below in some detail.

GLACIER PASS QUARRY COMPLEX

The Glacier Pass Quarry complex (Pl. 9A) consists of a series of twenty sites situated at the northern entrance to Glacier Pass (Map 2). Three, located in the Park (F1Qq-20, 21, 22), are discussed in the preceding report. Both these and the seventeen located outside the Park (F1Qq-3 to 19) are discussed as a group in the following section.

The site complex is centered around a nunatak which lies at the South Sulphur River's exit from the summit of the Pass. The sites begin at the confluence of the two headwater tributaries of the South Sulphur River, continuing through to the summit of Glacier Pass, a
distance of a little over 1 km. The complex consists of a series of workshops spotted at intervals along the forks of the South Sulphur River (mainly the east fork), around the western base of the nunatak, on the top of the nunatak, and into Glacier Pass to just inside the Park boundary.

The quarried material is a highly siliceous mudstone herein referred to as "Glacier Pass siliceous mudstone". Found at the sites in nodular form, it probably is eroding out of the underlying shale. The nodules originated by silica migrations in the original mud bed, and condensed into concretion-like forms. These "concretions", because of their high silica content, are more resistant than the parent bed; therefore they remain on the surface as the shales are eroded away.

Glacier Pass siliceous mudstone is susceptible to different weathering and chemical erosion. As a result its surface colours vary from buff to dark blue-grey. The unweathered material is dark blue-grey to blue-black in colour. Siliceous mudstone, found in sites in the Upper Snake Indian Valley, likely from the same formation, was also extracted from alluvial gravels as water rolled cobbles (e.g. FiQo-4, FiQk-4).

A total of 997 artifacts were collected (Table 4). Flake debitage comprised over 95% of the total. With the exception of two quartzite, one chalcedony, one Nordegg chert and one ochre specimen; all the assemblage is comprised of the quarried siliceous mudstone (Table 7).

The cores (N=12) vary in size (Pl. 19A,B), are multidirectional, and have ground, unground or prepared platforms. Core fragments and core rejuvenation flakes (N=9) have a low frequency suggesting a
preference for bifacial preforms or bifacial/preform cores rather than blank flake production, although the latter were produced. Waste flakage (N=428) is common. Most are derived from nodule reduction and preform manufacture. Nodule reduction flakes are characterized by little or no platform preparation, and large or irregular striking platforms, characteristic of hard hammer percussion (Pl. 19:C,F,H) Bifacial and/or preform manufacture flakes are characterized by either faceted or ground and faceted striking platforms. In many instances these platforms contain portions of the former biface edge (Pl. 19:D,E,G). Broken flake fragments (N=453) are common. This high incidence is characteristic of directpercussion techniques, particularly hard hammer percussion.

A bifacial preform/core was found (Pl. 20:A). This type may have been the preferred core type manufactured at the site for transport elsewhere. Although no other bifacial preform/cores were recovered from the quarry area, they were found in the Rock Creek Valley at FiQq-1 outside the Park, and in the Snake Indian Valley at FiQo-8 (Pl. 14:B). Other bifaces include: --

(1) A projectile point (Pl. 20:F) found on the summit of the nunatak. It is different to known Northern Plains/Rocky Mountain point types (see p.138).

(2) An asymmetrical lanceolate biface (Pl. 20:B)(length 9 cm, width 3.4 cm) apparently discarded because of two areas of steep step fracture along both lateral edges. Pressure flaking at the tip, along with the generally thin biconvex cross section, suggest it was a projectile point preform.

(3) An asymmetrical ovate biface (length 5.9 cm, width 4.1 cm)
(Pl. 20:C), with a thick plano-convex cross section. It was formed by soft hammer percussion.

(4) An ovate, grey shield quartzite biface (Pl. 20:E) (length 9.0 cm, width 4.7 cm). The striking platform of the original blank comprises part of the left lateral edge. It was produced by soft hammer percussion and has a thin biconvex cross section. Heavy edge faceting and wear occurs.

The common characteristic of these bifaces and preforms is their length, which never exceeds 9.1 cm. The largest specimen found, a large decortication flake (13 cm in length, 10.4 cm wide), if reduced to a bifacial form, would produce a form not greater than 9 cm in length and 5 to 7 cm in width. This size limitation reflects the size of the nodules available.

Two scraping implements were also collected. Both have sharp edges with little or no wear in evidence. They include: --

(1) An endscraper (Pl. 20:1) made on a thick decortication fragment. Only the distal working edge is modified by the removal of steep pressure flakes (length 5.8 cm, width 5.5 cm).

(2) A scraper-plane produced on a large flake fragment (Pl. 20:H). Only the ventral surface has been modified by the removal of soft hammer percussion flakes. The ventral-dorsal surface junction served as the working edge (length 7.6 cm, width 5.0 cm).

Six retouched flakes were found. Four have limited retouch, and two marginal retouch along the entire edges. One specimen is marginally pressure retouched along the proximal and distal edges, while the other is percussion retouched along the proximal edge only (Pl. 20:D,G).

The Glacier Pass Quarry was probably exploited by family sized
groups, perhaps each workshop represents a single visit. The lithic type distribution is primarily limited to Glacier Pass, Mowitch Creek, Snake Indian drainage basin to the southwest, and the South Sulphur River at Brewster's Wall (FiQr-1 to 3) to the north. It is absent in the Rock Creek Valley, (the adjacent valley to the southeast), where two sites were located, one of which was in an east-west Pass (Eagle's Nest Pass) to the next valley east; suggesting the people utilizing the quarry had a localized north-south range, moving between the Sulphur and Snake Indian drainage via Glacier Pass.

Siliceous mudstone sporadically appears in the Athbasca Valley. Some of it may be Glacier Pass type mudstone, obtained from gravels and tills, and some may be from the quarry complex.

BREWSTER'S WALL

Three campsites (FiQr-1 to 3) were located near the junction of the Brewster's Wall Valley with the South Sulphur River. They contained a few flakes of Glacier Pass siliceous mudstone.

ROCK CREEK VALLEY

Two sites (FiQp-2, FiQq-1) were located in the Rock Creek Valley. FiQp-2, a workshop, was found near the summit of Eagle's Nest Pass which leads from the Rock Creek Valley to the Upper Wildhay River Valley. Here some flakes of a white and red-coral coloured chert were found.

FiQq-1, a campsite in the Rock Creek Valley, produced a discarded core nucleous of a distinct light grey banded chert, a biface fragment (tip) of Nordegg chert and a bifacial preform/core of a dull black chert characterized by a thick biconvex cross section and irregular
flakes scars.

ATHABASCA DRAINAGE

Seventeen prehistoric sites were located in the Athabasca River-Maskuta Creek area east of Jasper National Park (Map 2). The sites include two isolated finds (FQk-5, 7) and 10 campsites of varying sizes. Five (FQk-1, FQk-4, 6, FhQk-2, 3), of particular relevance to Park prehistory, are discussed in the following sections. The other campsites are small in area, and located on well drained, stabilized landforms along the Athabasca River, adjacent to springs and streams.

FQK-4

FQk-4 is a base campsite, ca 10,000 square meters in area, situated where Orchard Creek bisects the Athabasca's lower valley train terrace. The site was exposed and essentially destroyed by the construction of the Brule Lake Road. Fire broken rock and calcified and burned bone fragments are common. The latter indicating the smashing of bones which were then boiled to produce bone grease.

One hundred and seventy-seven artifacts were collected, which included a variety of lithic types. Shield quartzites, the most common type, made up 59% of the assemblage (Table 8). The remainder consists of various varieties of chert, siliceous siltstone, Glacier Pass siliceous mudstone, and some small resharpening flakes of obsidian. The latter is identified by x-ray florescence as being from the Anehiem Lake area of central British Columbia. Two of the three projectile points and one endscraper were made of quartzite.

Two projectile point types found consist of stemmed and lanceolate forms (Pl. 21:D, E). They are not similar to the typical Northern
Plains/Rocky Mountain types (see page 138).

Four endscrapers were found (Pl. 21:H). They vary from 2.2 cm to 10.7 cm in length and from 1.9 cm to 3.6 cm in width; manufactured on bipolar decortication flakes (N=1), hard hammer percussion flakes (N=2), and spatulate-shaped soft hammer percussion flakes (N=2). Modifications vary from working edge steep percussion and pressure retouch (N=2), to marginal pressure or percussion retouch on three sides (N=2). Two are made of quartzite, one of black vitreous chert and one of grey-brown chert.

Quartzite cobble decortication spalls (N=3) and spall fragments (N=1) were found. The specimens are either marginally retouched and utilized along one edge (N=2) or on three edges (N=2). Lengths range from 8.0 cm to 10.6 cm, and widths from 5.2 cm to 7.6 cm.

Bifacial cutting tools were represented by a single edge section of a quartzite biface, presumably detached during manufacture or resharpening.

A single, complete uniface was also recovered (Pl. 21:N). Manufactured on a large blade-like quartzite spall, only one surface is completely flaked. The opposite surface has discontinuous marginal retouch (length 12.1 cm, width 5.7 cm). A drill stem fragment was also found along with a quartzite cobble fragment. The latter may have functioned as a chopping implement and a scraping plane. It has unifacial percussion retouch along the distal end and bifacial percussion retouch on the proximal edge.

Five broken microblades were recovered from the site. The only such find in the Alberta Rockies. Four have thin profiles, prepared platforms and flat bulbs of percussion, characteristic of indirect
percussion or core detachment. They were generally parallel sided, exhibiting one \( (N=1) \) or two \( (N=4) \) arris on the dorsal surface from previous blade removal (lengths 1.3-1.8 cm \([N=4]\), widths .55-.9 cm \([N=4]\)). No microblade cores were recovered. Microblade industries are found both in the Subarctic and Interior Plateau of British Columbia where they date as late as 1500 years ago.

The site probably spans a considerable time period -- somewhere in the Middle Prehistoric time to 1000 or less years ago. The later date is based on obsidian hydration dates from the site.

FIQK-6

FIQK-6, a large campsite, is strategically situated at the confluence of Solomon Creek with the Athabasca River at the end of Brule Lake. It is located on the east side of Solomon Creek on the second terrace (15-20 m elevation) at the western end of the upper valley train terrace. Construction of the approach to the Solomon Creek bridge on the Brule Lake Road sheared off the southern terrace margin. The terrace is composed of alternating layers of sand and silt, approximately 2 m in depth, overlying glacial gravels. A total of 116 artifacts were collected (Table 5).

A variety of lithic types were present (Table 8). Quartzites (41%) and Nordegg chert (34%) are most common. The remainder included a variety of other cherts, and some Glacier Pass siliceous mudstone.

Endscrapers \((N=6)\) are the most common tool type. Sizes vary in length from 3.7 cm to 8.1 cm, and in width from 3.0 cm to 4.3 cm \((N=5)\). Dorsal surface modifications vary from unifacially percussion flaked \((N=1) \) (Pl. 21:J), to lateral marginal percussion retouch forms \((N=2) \) (Pl. 21:I,K), and single lateral edge bifacial percussion retouched
forms (N=1) (Pl. 21:L). Two specimens have no dorsal surface modifications. The scraping edge varies from pronounced (N=2) to slightly convex (N=4).

No projectile points were found at this site. Bifacial (N=3) and unifacial (N=1) cutting tools are represented by three fragments, and only one complete biface (Pl. 21:0) (length 3.9 cm, width 2.9 cm). Edge use reduction is absent. Other tools from the site include bifacial and unifacial marginally retouched quartzite and chert flakes or flake fragments. Decortication flakes also occur.

The site contains occupations at 40 cm and 70 cm below surface, and although there are no dates available for it, the site is probably very old.

FHQK-2

FhQk-2, a small campsite, is located approximately 14 km southwest of Hinton on Highway 16. The site was situated on a south-facing alluvial terrace overlooking Maskuta Creek. The terrace has 70 cm of silt and sand layers overlying glacio-fluvial gravels. Construction of Highway 16 truncated the southeast portion of the site, probably eradicating 80% of the total site area.

A total of 19 lithic artifacts were recovered. A limited variety of fine grained lithic types were found (Table 8). A Hanna type projectile point (Pl. 21:A) and two endscrapers, plus 3 utilized flake fragments were among the assemblage.

The endscrapers are morphologically dissimilar -- one is manufactured on a blade-like flake with only the distal working edge modified by pressure retouch (length 2.1 cm, width 1.4 cm). The second specimen is produced on the distal end of a large flake fragment (length 2.8 cm,
width 2.7 cm). Steep marginal retouch occurs on three sides and marginal retouch along the junction of the original fracture and the ventral surface. The distal edge has extensive lower edge faceting from use.

FhQk-2 is a single component campsite probably dating around 3000 years ago.

FHQK-3

FhQk-3 is located on the northwest side of Highway 16, approximately three km southwest of FhQk-2. The site was situated on the surface of an elevated moraine overlooking Maskuta Creek. An artificial runoff channel bisected the moraine exposing the site and destroying some 90% of it.

Forty-one artifacts consisting of a variety of lithic types were collected (Table 5,8). Shield quartzites represent over 50% of the assemblage.

Two lanceolate projectile point fragments were found. One, a base fragment, is a Plainview-like form (Pl. 21:F, pp. 142). The other (Pl. 21:G, pp. 143), a lanceolate body fragment. These suggest a date of ca 8000 years for the site. A wedge shaped biface fragment was also found (length 3.5 cm, width 2.9 cm). Its lateral sides are near-straight fractures suggesting the complete bifacial form was intentionally fractured longitudinally, then perpendicular to the longitudinal fracture, to produce a wedge-like form. The fragment lacks battering on the proximal fracture surface or edge crushing on the distal bifacial edge.
FIQL-1

FIQL-1 is a campsite located on the west side of Solomon Creek. Road construction bisected sand dune formations revealing a hearth. Four flakes were found in close proximity. These dunes are approximately 5 m above the present Brule Lake Level.

A carbon sample from the hearth produced a Radiocarbon Date of 2870 ± 180 years (GSC-1730) for the site. This indicates that the dunes had largely stabilized by then and were used for camp areas.
APPENDIX 2

PROJECTILE POINT DESCRIPTIONS

In the Northern Plains/Rocky Mountains, as elsewhere in North America, projectile points are useful time and cultural indicators. These indicators consist of differences in various stylistic elements reflecting changing cultural preferences through time and space. Nineteen projectile points, spanning the past 10 millennia were recovered during the inventory. These, plus 32 points from the Gorden Bried Collection are described in the following appendix, and classified when possible into types known elsewhere in the Northern Plains/Rocky Mountains.

The description and classification system utilized herein is based on other studies (Reeves 1972, 1974a, 1974b, Quigg 1974). It allows for comparison of forms to determine both the time range for Native utilization of the Jasper area, and cultural associations of past prehistoric peoples. The points are grouped according to whether they are arrow, atlatl or spear points. Within each group they are classified into types. Each type is then described in some detail.

ARROW POINTS

PLAINS TRIANGULAR (N=3) (PI. 11:B; 18:P, Q)

Form: Triangular forms. Straight to slightly excurvate lateral edges. Straight to slightly convex base.

Length: 2.6 - 2.8 cm (N=2)

Width: 2.0 cm (N=1)

Lithic Type: Quartzite (N=1), Grey chalcedony (N=1), Nordegg chert (N-1).

Distribution: FgQm-6 (N=1), Bried Collection (N=2)
Modification: Completely bifacial (N=2) to marginal bifacial edge retouch (N=1). Flaking patterns vary from pressure flaking to soft hammer percussion, directed perpendicular to the edge with irregular overlap. Two bases are thinned.

Period Association: Late Prehistoric, ca A.D. 1000-1850.

Discussion: Although all three forms are incomplete, their length is somewhat greater than previously recorded Plains Triangular forms (Reeves 1974, Quigg 1974). Plains Triangular are common in the Northern Plains and Rocky Mountains areas, e.g. Banff (Christensen 1971), Bighorn Reservoir (Reeves, n.d.), the Rocky Mountain Trench (Choquette 1975, pers. comm.) and Waterton Lakes National Park (Reeves 1972).

PLAINS SIDE NOTCHED (N=4) (Pl. 18:A, B, C, D)

Form: Triangular body outline. Straight to slightly convex lateral body edges. Acute to obtuse shoulders with small side notches. Straight to slightly convex base. Basal edges straight (N=3) to rounded (N=1), low to high with an overall rectanguloid shape.

Length: 1.5 - 2.5 cm (N=3)

Width: 1.3 - 1.5 cm (N=3)

Lithic Type: Green siliceous siltstone, Grey chalcedony, Nordegg and Grey chert.

Distribution: Bried Collection

Modification: Oblique proximal pressure flaking which overlaps irregularly along the longitudinal axis. Forms are completely bifacially modified including the base.

Period Association: Late Prehistoric, ca A.D. 1000-1850

Discussion: Plains Side Notched points occur throughout the Northern Plains/Rocky Mountains: Banff National Park (Christensen 1971),
Bighorn Reservoir (Reeves n.d.), Crowsnest Pass (Reeves 1974b), Waterton Lakes National Park (Reeves 1972). They also occur in the Arrow Lakes region (Turnbull 1973), and in the Caribou region of British Columbia (Sneed 1972).

PRAIRIE SIDE NOTCHED (N=4), (Pl. 13:F; 18:G, H, L)


- Length: 1.4 - 2.0 cm (N=3)
- Width: 1.2 - 1.4 cm (N=3)

Lithic Type: Black chert (N=2), Grey (N=1) and Brown (N=1) chalcedony.

Distribution: FgQm-14 (N=1), Bried Collection (N=3)

Modification: Pressure bifacial flaking, either proximal oblique or perpendicular to the longitudinal axis. Biconvex cross section. Base bifacially thinned.

Period Association: Late Prehistoric, ca A.D. 500 - A.D. 1000+

Discussion: Common form in the Northern Plains/Rocky Mountains. Similar forms occur in Banff (Christensen 1971), Waterton Lakes National Park (Reeves 1972) and in the Rocky Mountain Trench (Choquette 1975, pers. comm.).

TIMBER RIDGE SIDE NOTCHED (N=1) (Pl. 18:E)


- Length: 2.1 cm; Width 1.1 cm

Lithic Type: Brown chalcedony

Distribution: Bried Collection

Period Association: Type has been dated in Southwestern Alberta between A.D. 150 - A.D. 750 or 1000. (Late Prehistoric)

Discussion: Principal point type found in the Avonlea Phase of the Northern Plains/Rocky Mountains. Similar forms found in Banff (Christensen 1971), Waterton Lakes National Park (Reeves 1972), Crowsnest Pass (Reeves 1974b), the Rocky Mountain Trench (Choquette 1975, pers. comm.), and the Arrow Lakes Region (Turnbull 1973).

SAMANTHA-LIKE SIDE NOTCHED (N=2)(P1. 18:F, I)

Form: Ovate (N=1), to lanceolate (N=1) body outline. Shallow expanding notches. Right angle to obtuse shoulders. Acute rounded basal edges. Straight to convex base.

Length: 2.0 - 2.8 cm
Width: 0.9 - 1.1 cm

Lithic Type: Light green siliceous siltstone and Green-brown chert.

Distribution: Bried Collection

Modification: Regular bifacial proximal oblique (N=1) or irregular perpendicular pressure flaking (N=1). Bases bifacially thinned. Thin to thick biconvex cross section.

Period Association: Late Prehistoric, ca A.D. 400 - A.D. 700

Discussion: Form similar to Samantha Side Notched types of the Northwestern Plains (Reeves 1972).

UNNAMED SIDE NOTCHED - TYPE "A" (N=2) (P1. 18:J, K)

Form: Ovate body outline. Straight to excursive lateral body edges. Shallow "v" shaped to expanding "u" shaped notches with
obtuse shoulders. Basal edges rounded to rectanguloid. Point of maximum width across the basal edges - notch junction. Straight to concave base.

Length: 2.1 cm (N=2)
Width: 1.2 - 1.3 cm (N=2)

Lithic Type: Kootenai argillite and Grey chalcedony
Distribution: Bried Collection
Modification: Bifacially pressure flaked, random to proximal oblique pattern. Bifacially thinned base, restricted to edge margin. Notches formed by one or two flakes detached from both surfaces.

Period Association: Late Prehistoric
Discussion: May be variants of Plains or Prairie Side Notched forms.

UNNAMED SIDE NOTCHED - TYPE "B" (N=2) (Pl. 12:A; 13:C)

Length: 2.8 - 2.9 cm (N=2)
Width: 1.6 - 1.9 cm (N=2)

Lithic Type: Grey chert and White quartz
Distribution: FgQm-6, FgQm-12 (Bried Collection)
Modification: Random bifacial pressure flaking. Base lightly thinned. Notches formed by two to three flakes detached from both surfaces. Base edge or notch grinding absent. Generally thick cross section.

Period Association: Late Prehistoric (?)
Discussion: Not described in literature for Northern Plains/Rocky Mountains/Interior Plateau. May be a boreal forest type.

PLATEAU SIDE NOTCHED (N=2) (Pl. 18:N, 0)

Form: Triangular to ovate body outline. Straight to slightly excursive lateral body edges. Broad, deep to shallow "u" shaped notches. High basal edges. Straight bases and rectangular basal edge configuration. Widest point across the base.

Length: 2.6 - 3.0 cm (N=2)
Width: 1.1 - 1.5 cm (N=2)

Lithic Type: Basalt (N=2)
Distribution: Bried Collection
Modification: Controlled oblique proximal to irregular bifacial pressure flaking. Thick biconvex to diamond-like cross section. Base thinned by two to three pressure flakes removed from both surfaces.

Period Association: Similar forms are found in the Kamloops Phase (A.D. 1000 to historic) in the Fraser Plateau (Stryd 1973).


UNNAMED CORNER NOTCHED (N=3) (Pl. 13:G; 18:M, R)


Length: 2.2 - 2.6 cm (N=3)
Width: 1.4 - 1.7 cm (N=2)
Lithic Type: Glacier Pass siliceous mudstone, Nordegg and Black cherts.

Distribution: FgQm-14 and Bried Collection (N=2)

Modification: Random bifacial pressure flaking. Thick biconvex cross section. Base bifacially thinned by regular to irregular pressure flakes. Notch or base grinding is absent.

Period Association: Late Prehistoric (?)

Discussion: Type not represented in regional published literature.

ATLATL POINTS

BITTERROOT SIDE NOTCHED (N=1) (PI. 18:S)


Length: 2.8 cm
Width: 2.0 cm

Lithic Type: Nordegg chert

Distribution: Bried Collection

Modification: Oblique proximal to perpendicular bifacial pressure flaking. Short travelling bifacial base thinning pressure flakes.

Period Association: Middle Prehistoric, ca 5500-1000 B.C.

Discussion: Similar to Bitterroot Side Notched forms excavated in Waterton Lakes National Park (Reeves 1972, PI.18:2).

BESANT SIDE NOTCHED (N=1) (PI. 21:B)

Length: 4.1 cm; Width: 2.6 cm

**Lithic Type:** Banff chert

**Distribution:** FiQk-5

**Modification:** Soft hammer percussion performed. Bifacially pressure flaked, edge perpendicular pattern. Biconvex cross section. Preform percussion flake scars are visible where pressure flake scars do not overlap. Notches and base are ground and the base bifacially thinned by the removal of multiple parallel short travelling pressure flakes.


**Discussion:** Similar forms present in Banff (Christensen 1971, Fig. 6:21, 22, 23), Belly River (Quigg 1974, Fig. 19:19), and the Rocky Mountain Trench (Borden 1956, Pl. V:34).

**OXBOW (N=1) (Pl. 13:1)**

**Form:** Triangular to ovate body outline. Ovate lateral body edges. Shallow "v" shaped notches. Rounded basal edges. Pronounced concave base, resulting in an eared appearance of the basal edge. Widest point across the basal edges.

Length: 2.7 cm; Width 2.0 cm

**Lithic Type:** Banff chert

**Distribution:** FgQm-14

**Modification:** Unifacial edge perpendicular pressure flaking. Only the margin of the dorsal surface has been modified by short travelling abrupt pressure flakes. Plano-convex to prismatic cross section. Base lightly ground.
Period Association: Early Middle Prehistoric, ca 3000-1500 B.C.

Discussion: Oxbow points are common to the Northern Plains/Rocky Mountains. Similar forms appear in the Bighorn Reservoir area (Reeves n.d.), Waterton Lakes National Park (Reeves 1972, Pl. 18-21), Peace River region (Thompson 1973, Pl. 2b, c d), and Southwestern N.W.T. (i.e. Fisherman Lake)(Millar 1968, Fig. 62c).

PELICAN LAKE CORNER NOTCHED (N=3) (Pl. 10:1, K; 18:T)

Form: Lanceolate (N=1) to ovate (N=2) body outline. Excurvate lateral body edges. Sharp obtuse to acute shoulders. "U" shaped distal-oblique notches. Sharp to rounded notch-basal edge-base configuration. Convex base.

Length: 3.9 - 4.7 cm (N=2)
Width: 1.6 - 2.3 cm (N=3)

Lithic Type: Black, Banff cherts; Grey Chalcedony

Distribution: FeQ1-2, FfQm-6, Bried Collection

Modification: One specimen (Pl. 10:K) is largely unifacial. Only the perimeter exhibiting marginal bifacial retouch. The other two specimens exhibit sub-parallel regular to irregular pressure flaking perpendicular to the body edge. Bases bifacially thinned by a series of short travelling pressure flakes. Notches and base exhibit some grinding.

Period Association: Late Middle Prehistoric. Dated ca 1000 B.C. to A.D. 200-500 in Waterton Lakes National Park (Reeves 1972:166).

Discussion: Similar forms appear in Banff (Christensen 1971, Fig. 6:11-17), Waterton (Reeves 1972: Pl. 19:1-9), the Belly River (Quigg 1974, Fig. 19:17), and in the Rocky Mountain Trench (Choquette 1975, pers. comm.).
HANNA CORNER NOTCHED (N=1) (PL. 21:A)


Length: 5.0 cm; Width: 2.2 cm

Lithic Type: Grey-blue siliceous siltstone.

Distribution: FhQk-2

Modification: Parallel, edge perpendicular pressure flaking. Base bifacially thinned by 3 to 4 parallel pressure flakes. Base and notches ground.

Period Association: Late Middle Prehistoric, ca 1500-500 B.C.

Discussion: Widely distributed in the Northern Plains and Rocky Mountains. Identical forms appear in Banff (Christensen 1971, Fig. 6:2), Waterton (Reeves 1972, Pl. 19:22), and in the Rocky Mountain Trench (Borden 1956, Pl. V:31-33).

UNNAMED CORNER NOTCHED (N=2) (PL. 18:U, V)

Form: Ovate body outline. Straight to contracting ovate lateral body edges. Sharp to rounded right-angle to obtuse shoulders. Broad expanding "U" shaped notches. Low sharp to rounded notch-basal edge-base configuration. Widest point across shoulders.

Length: 2.4 cm (both broken)

Width: 2.1 - 2.2 cm

Lithic Type: Quartzite (N=1), White chert (N=1)

Distribution: Bried Collection

Modification: Soft hammer percussion preformed. Irregular to parallel marginal, edge perpendicular pressure flaking. Base thinning restricted to abrupt irregular to parallel bifacial pressure flaking.
Base and notches exhibit some grinding. Cross section tabular to thick biconvex.

**Period Association:** Middle Prehistoric

**Discussion:** Varies from established types in the Northern Plains/Rocky Mountains typologically. Vaguely similar to Pelican Lake or Hanna Corner Notched varieties. Similar forms appear in the Peace River region (Thompson 1973, Pl. 2 and 3: H, I, P), in Banff (Christensen 1971, Fig. 6:3, 10), the Crowsnest Pass (Reeves 1974b, Pl. 5:3), and Waterton (Reeves 1972, Pl. 18:16; Pl. 19:13).

**UNNAMED STEMMED - TYPE "A" (N=1) (Pl. 18:W)**

**Form:** Ovate to triangular body outline. Asymmetrical rounded to sharp obtuse shoulders. Straight parallel stem. Straight to slightly convex base.

Length: 2.8 cm; Width: 1.9 cm

**Lithic Type:** Kootenai argillite

**Distribution:** Bried Collection

**Modification:** Random oblique proximal to edge perpendicular bifacial pressure flaking. Base bifacially thinned by short travelling marginal pressure flakes. Base and lateral stem edges unground.

**Period Association:** Middle Prehistoric (?)

**Discussion:** Closest similar forms appear in the Peace River (Thompson 1973: Pl. 4:B) and in the Arrow Lakes region (Turnbull 1973, Pl. II:s, y).

**UNNAMED STEMMED - TYPE "B" (N=3) (Pl. 18:X; 21:C, D)**

**Form:** Ovate to triangular body outline. Rounded obtuse shoulders. Expanding stem. Concave base producing an eared shaped stem, lateral edge-base junction. Widest point across shoulders.
Length: 2.3 - 3.4 cm (N=3)
Width: 1.9 - 2.1 cm (N=2)

Lithic Type: Quartzite (N=2) and Black chert
Distribution: FiQk-4, 8 and Bried Collection
Modification: Bifacially pressure flaked. One specimen (Pl. 21:D) has fine parallel oblique proximal pressure flaking. The remaining two exhibit irregular edge perpendicular pressure flaking. Bases bifacially thinned for a short distance either side of the longitudinal axis, producing the base concavity. One (Pl. 21:C) exhibits base and lateral edge grinding. The squat shape exhibited by two of the specimens (Pl. 18:X; 21:C) suggests breakage and point reworking.

Period Association: Middle Prehistoric (?)

Discussion: While morphologically similar, the three specimens are not necessarily of the same age, and may be regional variations of the Duncan type or Oxbow (Pl. 21:C; 18:X). The latter specimen has a close similarity to a point from the Bighorn Reservoir area (Reeves n.d.).

UNNAMED STEMMED - TYPE "C" (N=1) (Pl. 20:F)

Form: Lanceolate body outline (?). Asymmetrical shallow sharp obtuse shoulders. Contracting stem. Slightly concave base.
Length: 2.9 cm (broken above shoulders)
Width: 2.2 cm

Lithic Type: Nordegg chert
Distribution: Glacier Pass FiQq-11

Modification: Irregular to regular edge perpendicular bifacially pressure flaked. Base bifacially thinned by the removal of short travelling parallel to sub-parallel pressure flakes producing the basal concavity. Stem lateral edges and base ground.
Period Association: Early Middle Prehistoric (?)  
Discussion: Similar forms appear to the north in the Peace River region (Thompson 1973, Pl. 4B), in the southern N.W.T. (Millar 1968, Fig. 64e), and in the Caribou Region of Central B.C. (Sneed 1972, Fig. 2u, v).

LANCEOLATE FORM (N=1) (Pl. 21:E)  
Form: Broken lanceolate form. Straight to slightly excurvate edges. Asymmetrical straight base. 
Length: 3.5 cm (tip broken)  
Width: 2.3 cm  
Lithic type: Black quartzite  
Distribution: FiQk-4  
Period Association: Middle Prehistoric (?)  
Discussion: Tip cleanly broken perpendicular to longitudinal axis, suggesting accidental breakage rather than impact. Does not exhibit thin cross section or regular flaking characteristic of lanceolate points.

UNCLASSIFIABLE ATLATL POINT FRAGMENTS  
Tips (N=2) (Pl. 10:J; 14:D)  
Broken tips, characterized by regular parallel edge perpendicular pressure flaking.  
Lithic Type: Black chert and Glacier Pass siliceous mudstone.
Distribution: FgQM-6, FiQo-12

Discussion: FgQM-6 specimen is similar in form, flaking pattern and cross section to complete Pelican Lake corner notched point from the same site.

Body: (N=3) (Pl. 10:G; 13:K)

Small body midsection and lateral edge section fragments. All exhibit perpendicular pressure flake scars.

Lithic Type: Black vitreous, black and Nordegg cherts.

Distribution: FfQM-5, FiQo-4; FiQk-4

Discussion: Thickness of fragments suggests that they were atlatl sized projectile points.

Base: (N=1) (Pl. 14:C)

Finely pressure flaked, concave base. Base and proximal notch edges are ground.

Lithic Type: White chert

Distribution: FiQo-9

Discussion: Broken just above basal edges. Base fragment is similar to the Pelican Lake type base.

SPEAR POINTS

ALBERTA (N=1)(Pl. 12:D)

Form: Broken parallel stem point. Originally lanceolate outline with contracting ovate lateral edges. Sharp to rounded obtuse shoulders. Parallel stem with a rounded proximal lateral stem-base configuration. Slightly convex base.

Length: 4.7 cm (broken above the shoulders)

Width: 3.0 cm

Lithic Type: Black chert
Distribution: FgQm-6 (Bried Collection)

Modification: Broad parallel edge perpendicular bifacial pressure flaking. Stem and base ground. Broken edge has been utilized and left lateral edge-broken edge juncture burinated with small percussion flake or flakes detached downward parallel with the lateral edge, producing an incising or engraving edge at the juncture with the broken edge.

Period Association: Early Prehistoric, ca 7000-6000 B.C.

Discussion: Alberta point types have been found throughout the Northern Plains, and in the Peace River area. Similar form collected from Banff (Christensen 1971, Fig. 4:9).

AGATE BASIN (N=1) (Pl. 18:AA)

Form: Broken lanceolate point. Excurvate edges. Point of maximum width approximately half the distance from the base. Convex base.

Length: 3.7 cm (tip broken

Width: 2.2 cm

Lithic Type: Quartzite

Distribution: Bried Collection


Period Association: Early Prehistoric, ca 8000-5500 B.C.

Discussion: Morphologically similar to the Agate Basin type. Similar forms found in Banff (Christensen 1971, Fig. 4:6), Crowsnest Pass (Reeves 1974a, Pl. V:34), and Waterton (Reeves 1972, Pl. 17:45).

LUSK (N=1) (Pl. 18:Z)

Form: Broken lanceolate point. Straight to excurvate lateral edges. Convex base with small central shallow concavity.
Length: 3.7 cm (tip broken)

Width: 1.9 cm

**Lithic Type:** Siliceous Siltstone

**Distribution:** Bried Collection

**Modification:** Bifacially pressure flaked edge-perpendicular pattern.

Lithic type susceptible to chemical erosion and weathering, resulting in the rounded appearance of form. The base indentation may have been intentional or the result of impact. Rounded base and lateral edges are the result of grinding or weathering.

**Period Association:** Early Prehistoric, ca 6500-5500 B.C.

**Discussion:** Morphologically similar to the Lusk type from Waterton (Reeves 1972, Pl. 17:40).

**PLAINVIEW (N=3) (Pl. 12:C; 18:Y; 12:K)**

**Form:** Broken (N=1) and broken-resharpened (N=2) forms. Lanceolate to expanding lanceolate body outline. Straight lateral body edges. Straight (N=1) to concave base (N=2) with projecting lateral edge-base junctions.

Length: 2.4 - 4.0 cm (N=3)

Width: 1.9 - 2.9 cm (N-3)

**Lithic Type:** Red Jasper, Black chert and Grey-brown siliceous siltstone.

**Distribution:** FgQm-6 (Bried Collection), FhQk-3, and Bried Collection.

**Modification:** Parallel to sub-parallel bifacial edge perpendicular pressure flaking. Two specimens (Pl. 12:C; 18:Y) exhibit a stubby appearance resulting from breakage and subsequent resharpening. Bases bifacially thinned by multiple parallel pressure flakes producing a concave (Pl. 12:C) or a straight (Pl. 18:Y) base. Basal or lateral
Period Association: Early Prehistoric, ca 8000-7000 B.C.

Discussion: Base and proximal lateral edge grinding, characteristic of the Plainview type are absent on the specimens; morphologically however they are Plainview like. The FhQk-3 specimen most closely parallels the "classic" Plainview form, and the Bried Collection specimen is similar to Plainview forms from the Bighorn Reservoir (Reeves n.d.). The FgQm-6 specimen, while atypical with its straight base, resembles a Plainview specimen from the Birch Creek site in Idaho (Swanson 1972, Fig. 49:e).

BROKEN/UNCLASSIFIABLE SPEAR POINT FRAGMENTS

Tip: (N=1) (Pl. 18:BB)

Ovate form with thin biconvex cross section. Parallel to sub-parallel oblique proximal bifacial pressure flaking.

Length: 2.9 cm; Width: 2.3 cm

Lithic Type: Black chert

Distribution: Bried Collection

Body: (N=1) (Pl. 21:G)

Lanceolate form. Thin biconvex cross section. Even parallel bifacial pressure flaking.

Length: 2.8 cm; Width 2.3 cm

Lithic Type: Quartzite

Distribution: FhQk-3
In addition to the Bried Collection projectile points, as described by type in Appendix 2, a number of other tools were collected by Gordon Bried. Some, in particular biface forms, are not represented in the inventory artifacts. These provide some information and are described below. All are of unknown provenience within the Athabasca Valley.

ENDSCRAPERS

SMALL TRIANGULAR (N=2) (Pl. 15:C, D)

Form: Small triangular or asymmetrical ovate form. Straight to excursive lateral edges. Asymmetrical plano-convex longitudinal cross section. Slightly convex to convex bit.

Length: 2.0 - 2.1 cm (N=2)

Width: 1.5 - 2.0 cm (N=2)

Lithic Type: Vitreous black chert and Grey chalcedony.

Modification: Dorsally pressure flaked bit has parallel steep pressure retouch. One specimen, apparently broken during use has an exaggerated convex bit (Pl. 15:C). Both forms are basally thinned to facilitate hafting.

Period Association: Late Prehistoric (?)

Discussion: Vary slightly in form from those found in the inventory, closest to specimen from FgQm-6 (Pl. 12:E). Similar forms found on the Plains (Quigg 1974, Fig. 21:10), and in the Crowsnest Pass (Reeves 1974b, Pl. 6:10).
BIFACES

SMALL SYMMETRICAL LANCEOLATE (N=1) (Pl. 15K)


Length: 3.4 cm; Width: 1.8 cm

Lithic Type: White chert

Modifications: Bifacial edge perpendicular pressure flaking. Edges slightly serrated.

Period Association: Unknown

Discussion: No similar forms cited in literature.

SMALL THIN ASYMMETRICAL LANCEOLATE (N=3) (Pl. 15:G, H, I)

Form: Asymmetrical lanceolate outline. Lateral edges contracting from ovate to irregular. Biconvex cross section. Tip rounded, base oblique straight to irregular.

Length: 2.7 - 3.1 cm

Width: 1.0 - 1.1 cm

Lithic Type: Shield quartzite (N=1), Green-brown (N=1) and Grey (N-1) cherts.

Modification: Bifacial to marginal bifacial edge perpendicular pressure retouch.

Period Association: Possibly Late Prehistoric

Discussion: Similar forms found in the Crowsnest Pass (Reeves 1974a, Pl. V:35).

SMALL TRIANGULAR (N=1) (Pl. 15:J)

Form: Asymmetrical triangular outline. Thin biconvex cross section.
Length: 3.0 cm; Width 1.8 cm

Lithic Type: Brown chalcedony

Modification: Bifacial regular edge perpendicular pressure flaking. Base thinned by a series of short travelling pressure flakes on both surfaces. Left lateral edge is indented, presumably from use and re-sharpening.

Period Association: Late Prehistoric

Discussion: May have functioned as a perforator as well as a knife. Similar forms found in association with Plains Triangular points (Quigg 1974, Fig. 20:7).

SMALL ASYMMETRICAL OVATE (N=2) (Pl. 15:E, F)

Form: Wide to narrow ovate outline. Contracting ovate lateral edge. Convex base and rounded pointed tips. Thin biconvex cross section.

Length: 3.2 cm (N=2)

Width: 1.8 cm - 2.4 cm (N=2),

Lithic Type: Green-brown chert and Siliceous mudstone.

Modification: Primary modification is bifacial soft hammer percussion. Secondary marginal pressure flaking. One specimen (Pl. 15:F) may have been modified for hafting by the removal of percussion flakes to produce an asymmetrical "stem".

Period Association: Unknown

Discussion: Tips are slightly rounded suggesting use as perforators or for incising. Only one specimen (Pl. 15:F ) has pronounced lateral edge reduction from use. Similar forms occur in the Northern Plains (Quigg 1974, Fi.g 20:2), and in the Crowsnest Pass (Reeves 1974b, Pl. 10:9).
APPENDIX 4
STONE TOOL LITHIC TYPES

The study of the types of stone used for chipped stone tool manufacture by Native peoples, provides insight into trade, cultural patterns, and preferences. Native peoples had very definite preferences for certain types of materials, which often were traded or carried hundreds of kilometers from the quarry source.

These imported materials and certain locally obtained materials often had superior fracturing qualities, the most important variable in the selection of material for stone tool manufacture. Other variables considered by the artisans were hardness, sharpness and ability to hold an edge. The siliceous minerals which best meet these criteria are various types of silicas. They may be fine grained forms such as chert, chalcedony, silicified siltstones and mudstones, and obsidian. These are often used in small tool manufacture in which a sharp edge for cutting or scraping was required.

Coarse grained siliceous materials, usually quartzite, are also used, particularly for heavy duty tasks requiring a strong edge, such as in butchering ungulates and smashing bones. Quartzites are however used in small tool manufacture as well.

The qualities and quantities of these various materials available in any one area to prehistoric man, varied considerably. Most suitable materials have restricted occurrences, and may be obtained either from bedrock quarries or as pebbles/cobbles from gravels and glacial tills.

A variety of lithic types both local and non-local are represented by the artifacts collected from the Jasper area (Table 6-8). These have been grouped into various types on the basis of distinctive
structural and colour characteristics. They are briefly described and discussed below.

Fine grained siliceous rocks are represented by various types of cherts, chalcedonies, and silicified silt and mud stones. Glacier Pass siliceous mudstone, a distinctively recognizable type, is commonly found in the Snake Indian and Sulphur River drainages (see p. 117). This restricted distribution suggest a territorial range of peoples moving in and out of the Park between the Smoky and Snake Indian River drainages.

Cherts present include a range of colour/structural varieties: black, grey, banded, white, brown, green-brown, coral, white and red jasper. These are of unknown source. Cherts of known source include the Banff and Nordegg formation varieties. Known quarries for the Nordegg Chert, a grainy black chert, occur on Shunda Creek east of Nordegg (Reeves n.d.). It is the most common chert in the sites suggesting it was obtained nearby in the Foothills where the formation outcrops.

Banff Chert is a dull coloured, banded black chert, derived from the Banff Formation. Banff chert is commonly found in sites in the Rockies between Banff and the Crowsnest Pass. It is rare in the Jasper sites, suggesting the material was brought in from the south. Local chert of unknown source probably include the dull coloured cherts, and the grey-brown mudstones and siltstones, which occur in low frequency in the sites.

Imported silicas probably include the vitreous light/bright coloured cherts, chalcedonies and jaspers. These types are relatively infrequent in the Paleozoic formations of the eastern Rocky Mountains. Their source may be in British Columbia, the Smoky River area or
elsewhere.

Exotic lithics are also represented by obsidian from Anhein Lake in British Columbia, basalt from B. C. and green argillite and light green siliceous siltstones, possibly from sources in the west Kootenays in southern British Columbia. Cryptalline and white quartz are probably local. There seems to be no particularly association of any lithic and projectile point types (Table 9), except for basalt and Plateau Side Notched Points.

Quartzites of varying grades are the most common lithic type. They are grouped into two source varieties, Shield and Rocky Mountain. Shield quartzites are derived from pebbles, cobbles and boulders found in glacial till deposited by the Continental Ice in the Edson area. These multicoloured quartzites are highly metamorphosed. They are a preferred material type often used for bifaces. The material is most common in the Athabasca Valley, particularly in the lower parts closest to the source area. It is less common in the Snake Indian, which is a considerable distance west of the Continental tills.

The second quartzite variety distinguished, Rocky Mountain, is less well metamorphosed. It originates from formations such as the Agog. Available in cobble or boulder form in gravels and mountain tills, the material was used, but less so than the Shield quartzites.
Alluvial: Soils, sand and gravels deposited by riverine processes. e.g. Terrace development.

Altithermal: A climatological period postulated by Antevs (1955), characterized by a period warmer and drier than the present. Dates for the period are circa 6,000 to 3,000 years B.C.

Artifact: In this report an artifact is any product resulting from human activities. e.g. Stone flakes, tools, etc.

Atlatl: A method by which spears, generally with longer and heavier shafts and larger projectile points than arrows, are propelled by use of a throwing board; a "spear thrower".

Band: A territorially based social group - larger than the nuclear family, but smaller than the tribe.

Base and Lateral edge grinding: A technique whereby the base edge and lateral edges are ground against another object, intentionally reducing its sharpness. This was done to facilitate effective hafting of stone tools so that the sinew binding was not severed.

Base thinning: The intentional removal of one or more multiple flakes, from either surface, parallel to the longitudinal axis, or perpendicular to the base edge. Presumably done to facilitate hafting. e.g. stone projectile points.

Biface: A stone tool which has been flaked on both surfaces, and is presumably used as a cutting tool.

Bifacial: A descriptive term for some objects flaked on both surfaces. Form may or may not necessarily serve as a cutting tool (e.g. bifacial projectile point, bifacial preform/core, wedge).
Blade: A long, generally parallel sided flake, with either a triangular or prismatic cross-section.

Blank: A flake which is unaltered by modification, but detached from a core with a specific post-manufactured form in mind.

Borden Designation: A method utilized for archaeological site designation, whereby a four letter code is used to designate an area 10' latitude by 10' longitude. Within each 10' square area, located sites are assigned consecutive numbers following the four letter code.

Burin: A stone tool or fragment, which has been intentionally altered to produce a sharp edge junction; by breaking or snapping a flake or tool to produce an acute or right angle break-lateral edge junction. This edge is used for incising or engraving, and may be resharpened by burin-blows (the detaching of small flakes perpendicular to the broken edge, parallel with the lateral edge).

Chronology: The method of ordering sequentially past events. In the Northern Plains, Rocky Mountains, chronology is based on stylistic and morphological changes, of projectile point systems through time.

Colluvial: Process whereby rock debris and soil are deposited by gravity at the base of a slope.

Complex: A series of related material traits, representing an archaeological unit. eg the workshop sites in Glacier Pass represent a single unit of quarrying. Hence, the Glacier Pass Quarry Complex.

Component: A single cultural unit within an archaeological site. A site may contain more than a single cultural unit, in which case it would be termed 'multicomponent'.
Core: A stone object which has been modified to allow the detachment of specific flakes. (eg blades).

Cultural area: A geographical area with enough distinctive traits so as to distinguish it from adjacent areas. (eg Boreal or Subarctic, Northern Plains, and Plateau cultural areas).

Eolian: Wind-blown deposits.

Ethnographic: The descriptive recording of cultures.

Faceted: Resulting from edge grinding or use whereby minute to small flakes are detached from the edge. On tool edges (eg endscraper) may denote use on a hard material.

Flake: A piece of stone detached by percussion or pressure techniques from the parent stone (eg core) during the manufacture of tools.

Graver: A small implement utilized for engraving or incising, differing from burins, in that a protruding sharpened tip is purposely formed.

Hafted: Attached to a shaft (eg arrow points hafted onto arrow shafts).

Hearth: A fireplace which may or may not be rock-lined.

Holocene: The present geological period, beginning some 10,000 years ago. May be an interglacial period. Characterized by warmer climate and the retreat of the glaciers.

Lithic: Of or pertaining to stone (ie lithic artifacts).

Loess: Wind-deposited dust, carried from deglaciation areas.

Obsidian Hydration Dating: A method by which the accumulated moisture layer on the exposed surfaces of obsidian artifacts is measured microscopically, then divided by a postulated rate of accumulation, to determine the age when the surface had been exposed.

Percussion flaking: Techniques of shaping stone artifacts by the removal of flakes with stone, bone, antler, or wood hammers.
Pictograph: Symbolic drawings on rock surfaces, usually with mediums like red or yellow ochre.
Pinedale: Nomin attached to the last sequence of the montane glaciations, circa 25,000 to 8,000 years B.P.
Pleistocene: Age of glaciation, circa 1,000,000 to 10,000 years.
Pressure flaking: Techniques of sharpening stone by the removal of flakes by pressure.
Projectile Point: arrow, atlatl or spear point.
Relative Dating: Inferential dating of components or artifacts by comparative typology (eg projectile point).
Retouch: The removal of small flakes from a stone artifact to sharpen or resharpen the edge.
Scraper: A tool used for scraping, presumably in skin dressing; nomin determined by working edge position- ie end-scraper, side-scraper.
Site: The location of past human use or occupation, determined by the evidence of cultural debris.
Site type: (adapted from Elliot 1970-71). The site typology used in this report is based on what the writer considers to have been primary activities occurring at an activity loci, as evidenced by the artifact assemblage, the density and extent of cultural refuse, and associated environmental variables, such as the topographic location, climate exposure, access to water, etc.
Classification is subject to revision upon the acquisition of additional data. Site functions need not be mutually exclusive. A site may function at the same time as a hunting camp, transitory campsite, and base camp. Also, it may function at one time as one type, and at another time as another. In the Jasper Park region, all habitations would be centered around hunting activities.
Habitation Sites:

1. **Base Camp**: These are very extensive sites usually occupy favourable locations in the valley floor, sheltered from the wind, adjacent to water, with an eastern or southern exposure. A degree of permanency is implied from the cultural materials. Although the site may have been reoccupied in different seasons for many millennia, the major occupation would be summer and fall, and hunting activities would stem from it. (eg FgQm-6). However, they may have been occupied during the winter as well.

2. **Campsites**: A general category for habitation sites whose more specific activity configuration cannot be inferred from the basis of the present data. Campsites may include habitations of a seasonal, hunting, or transitory nature. eg FgQm-12.

3. **Transitory Campsites**: located along major routes of travel in river valleys and mountain passes. These sites primarily functioned as brief stops for travelling through the area; however, localized hunting also occurred eg FiQo-19.

**Isolated Finds**: The sporadic occurrence of artifacts without associated cultural debris. These are usually found in areas unsuitable for habitation. eg FiQp-4.

**Lookout Sites**: Sites situated on a topographically prominent, exposed locale. Tools are common, but very little debitage and practically no bone or fire broken rock is associated. The locale is suitable for observing game or human activity in adjacent valley areas. eg FgQm-14.

**Workshop Sites**: Sites in which flake debitage of a similar lithic type occurs with little or no associated artifacts and/or cultural debris. Often the debitage is deposited in relatively concentrated amounts. eg FiQo-24.
Lookout/Workshop Sites: Adopted by the writer for those sites where flake debitage and tools occur in a limited area, in an elevated locale where an advantageous view of immediate terrain is offered. eg Valley terrace margin overlooking adjacent meadows or stream valley. eg FiQo-21.

Quarry Sites: Sites in which cores, blanks, tools, and flake debitage of similar lithic material type are concentrated into workshop areas adjacent to natural outcrops or exposures of similar lithic material. The material may occur stratigraphically as nodules within bedrock units, or as gravels within streams, or glacial deposits. Evidence for mining excavations may or may not be present. eg FiQq-3-22, Glacier Pass.

Caves: Habitation sites whose specific activity and temporal configuration usually cannot be inferred on the basis of preliminary data. They are located on valley sides and may function as winter or summer, base or hunting, camps, or as ceremonial loci.

Rock Structures: Rock cairns and alignments, located in prominent locales, such as the tops of hills, the edge of terraces, or along routes of human or animal travel. They may have functioned as ceremonial loci, burials, route markers, animal traps, etc.

Log Structures:
1. Cabins/Fur Trade Posts. Log building remains, usually locate on floodplains adjacent to major rivers or streams, and typified by linear wall mounds, hemispherical chimney mounds, and rectangular and conical pit depressions. eg FgQ1-1, FeQ1-1.
2. Crib Burials or Caches: Low, rectangular log structures, located on floodplains and valley sides, and often in areas of heavy forest growth. eg FiQo-2
3. **Tipis.** Conical frames or arrangements of poles covered with nailed-on log slabs, located on floodplains, and often in areas of heavy forest growth. *eg* FiQo-25.

**Spall:** A large wide flake detached from a nodule or a core (*eg* decortication spall).

**Spall Tool:** A spall, either modified or unmodified, which has been utilized.

**Temporal Units (Adapted from Elliott 1971):** Late Pleistocene and Holocene time can be segmented into units of varying degrees of cultural and temporal significance. A quadrinomial period system is used herein. While it has inherent limitations, it provides a flexible framework, largely devoid of cultural implications, for integrating archaeological components in the Northern Rocky Mountains.

The aboriginal temporal continuum may be divided into three prehistoric and one historic period. The prehistoric period, based on major stylistic complexes relating to basic tool and weapon systems appearing sequentially on the archaeological record, are of unequal duration. In effect, prehistoric temporal divisions are chiefly based on specific projectile point styles of known temporal duration; in this case, predominately from the Northern Plains. Styles, complexes and traditions from the adjacent Boreal forest and Cordilleran Plateau are poorly defined and largely not dated. Subsequently, the temporal associations and units are largely determined by the Plains/Rocky Mountain Sequence.

1. **Early Prehistoric** (ca. >7,400 B.C. - 5,500 B.C.) Archaeological units characterized by projectile point styles designed for use with heavy spear, of the type usually used for throwing or stabbing. Relevant styles may include Clovis, Folsom, Plainview, Milnesand,
Agate Basin, Alberta, and Scottsbluff (Plains Paleo-Indian and Northern Plains traditions), and Lerma-like (Cordilleran tradition and Lochnore complex).

2. **Middle Prehistoric** (ca. 5,500 B.C. - A.D. 400) Archaeological units characterized by projectile point styles, presumably designed for use with the spear thrower (atlatl). Relevant styles may include Oxbow, McKean, Hanna, Pelican Lake, and Besant (Plains Middle Prehistoric complexes), and other stemmed and corner-notched point types (Northern Rocky Mountains, Boreal forest, Plateau).

3. **Late Prehistoric** (A.D. 200-700 - A.D. 1800) Archaeological units characterized by projectile point styles presumably designed for use with the bow. Point styles may include a variety of unnotched and side-notched forms.

4. **Historic** (A.D. 1800 - A.D. 1915) Archaeological units characterized by white trade goods, often in association with aboriginal stone tools. The period incorporates both the Fur Trade Period and early white settlement.

**Typology:** Arrangement of materials according to defined criteria for purposes of analysis. For example, projectile points could be grouped according to stylistic and morphological attributes. With the inclusion of absolute dates, a typology in one area may become a basis for relative dating similar types in adjacent areas.
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STRYD, ARNOUD


SWANSON, EARL H., JR.

1972 Birch Creek: Human Ecology in the Cool Desert of the Northern Rocky Mountains 9000 B.C. - 1850 A.D. Idaho State University Press, Pocatello.

TEIT, J. A.


THOMPSON, H. R.


THOMPSON, IDA


TURNBULL, C. J.


WILLIAMS, M. B.

1949 Jasper National Park; A Descriptive Guide. H. R. Larson Co., Vancouver, Hamilton, Saskatoon.
WORMINGTON, H. M. and FORBIS, RICHARD G.

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### TABLE 3: JASPER NATIONAL PARK ARTIFACT TECHNOLOGICAL TYPES

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PREHISTORIC SITES
Distribution and Settlement Pattern

BASE CAMP
CAMP SITE
TRANSITORY CAMP
CAVE
LOOKOUT
WORKSHOP
LOOKOUT/WORKSHOP
ISOLATED FIND

MAP 2
PLATE 1

A  FfQm-1. Cottonwood Flats, depression adjacent to figure possible site of Laroque's House.

A  

B  
FeQ1-1. Historic cabin remains.
A  FiQo-25. Split-log tipi Snake Indian Valley.

B  FgQm-10. Log "crib" in Corral Creek Valley.
PLATE 4

A  FdQ1-1. Site location adjacent to Athabasca Falls (east view).

B  FfQm-5. Site location outlet of Pyramid Lake.
PLATE 5

A FgQm-1. Site location adjacent to Cold Sulphur Springs (north view).

B FgQm-6. Site location Moberly Flats (south view).
A  FgQm-12. Site location foreground southwest view.

B  FgQm-14. Site location south view.
PLATE 7

A  Schematic representation of pictographs from FhQm-1 (Devona cave).

B  FhQm-1. (Devona Cave). Site location northeast view.
A Overview of Willow Creek Meadows (east side of Willow Creek-Snake Indian River confluence).

B FiQo-8. Site location west view.
A  Glacier Pass looking southeast (into Park) location of FiQq-21.

B  FiQp-1. Site location Mowitch Valley ("Little Heaven" area). East view down Mowitch Creek.
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PLATE 11

A  Asymmetrical Ovate Biface: FfQm-9/Bried Collection
B  Asymmetrical Lanceolate Uniface: FfQm-9/Bried Collection
C  Asymmetrical Ovoid Uniface: FfQm-9/Bried Collection
D  Asymmetrical Foliate Leaf-Shaped Uniface: FfQm-9/Bried Collection
E  Retouched-Utilized Flake: FgQm-1/2
F  Retouched Flake Fragment: FgQm-1/9
G  Endscraper: FfQm-9/Bried Collection
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PLATE 13

A  Graver:  FgQm-6/60
B  Retouched Flake:  FgQm-6/8
C  Side-Notched Projectile Point:  FgQm-12/Bried Collection
D  Ovoid Biface:  FgQm-12/Bried Collection
E  Ovate Biface:  FgQm-12/Bried Collection
F  Prairie Side-Notched Point:  FgQm-14/18
G  Unnamed Corner-Notched Arrow Point:  FgQm-14/19
H  Retouched Flake Fragment:  FgQm-14/15
I  Oxbow Projectile Point:  FgQm-14/16
J  Retouched Flake:  FgQm-14/17
K  Projectile Point Body Fragment:  FiQo-4/1
L  Retouched Spall:  FiQo-3/1
M  Endscraper:  FiQo-8/31
N  Unmodified Endscraper:  FiQo-3/3
PLATE 14

A Broken Ovate Biface: FIQo-8/33
B Bifacial Preform/Core: FIQo-8/32
C Projectile Point Base: FIQo-9/1
D Projectile Point Tip: FIQo-12/1
E Utilized Flake Fragment: FIQo-17/2
F Unmodified Endscraper: FIQo-19/1
G Endscraper: FIQo-22/1
H Retouched Flake: FIQp-4/1
I Biface Midsection Fragment: FIQp-3/1
PLATE 15

A Ground and Pecked "Axe": FfQk-1/Bried Collection
B Asymmetrical Ovoid Uniface: FfQm-7/Bried Collection
C Endscraper: Bried Collection (Miscellaneous)
D Modified Endscraper: Bried Collection (Miscellaneous)
E Small Asymmetric Ovate Biface: Bried Collection (Miscellaneous)
F Small Asymmetric Ovate Biface: Bried Collection (Miscellaneous)
G Small Thin Asymmetric Lanceolate Biface: Bried Collection (Miscellaneous)
H Small Thin Asymmetric Lanceolate Biface: Bried Collection (Miscellaneous)
I Small Thin Asymmetric Lanceolate Biface: Bried Collection (Miscellaneous)
J Small Asymmetrical Triangular Biface: Bried Collection (Miscellaneous)
K Broken Small Symmetrical Lanceolate Biface: Bried Collection (Miscellaneous)
L Asymmetrical Ovate Biface: FfQm-7/Bried Collection
PLATE 16

A  Unifacial Tool: FfQm-2/1
B  Chopping Tool: FgQm-1/11
C  Unifacial Chopping Tool: FgQm-1/17
PLATE 17

A  Retouched Spall:  FfQm-6/1
B  Chopping Tool:  FgQm-12/1
PLATE 18
BRIED COLLECTION PROJECTILE POINTS FROM THE EAST PARK GATE TO JASPER TOWNSITE IN THE ATHABASCA VALLEY

A  Plains Side-Notched Arrow Point
B  Plains Side-Notched Arrow Point
C  Plains Side-Notched Arrow Point
D  Plains Side-Notched Arrow Point
E  Timber Ridge Side-Notched Arrow Point
F  Samantha-Like Side-Notched Arrow Point
G  Prairie Side-Notched Arrow Point
H  Prairie Side-Notched Arrow Point
I  Samantha-Like Side Notched Arrow Point
J  Unnamed Side-Notched Type "A" Arrow Point
K  Unnamed Side-Notched Type "A" Arrow Point
L  Prairie Side-Notched Arrow Point
M  Unnamed Corner-Notched Arrow Point
N  Plateau Side-Notched Arrow Point
O  Plateau Side-Notched Arrow Point
P  Plains Triangular Arrow Point
Q  Plains Triangular Arrow Point
R  Unnamed Corner-Notched Arrow Point
S  Bitterroot Side-Notched Atlatl Point
T  Pelican Lake Corner-Notched Atlatl Point
U  Unnamed Corner-Notched Atlatl Point
V  Unnamed Corner-Notched Atlatl Point
W  Unnamed Stemmed Type "A" Atlatl Point
X  Unnamed Stemmed Type "B" Atlatl Point
Y  Plainview Spear Point
Z  Lusk Spear Point
AA  Agate Basin Spear Point
BB  Unclassifiable Large Point Fragment
PLATE 19

GLACIER PASS ARTIFACTS

A  Core: FiQq-8/104
B  Core: FiQq-12/37
C  Core Reduction Flake: FiQq-19/5
D  Bifacial Manufacture Flake: FiQq-15/34
E  Bifacial Manufacture Flake: FiQq-7/49
F  Decortication Flake/Spall: FiQq-15/47
G  Bifacial Manufacture Flake: FiQq-5/25
H  Core Reduction Flake: FiQq-14/32
PLATE 20

GLACIER PASS STONE TOOLS

A  Bifacial Preform:  FiQq-16/30
B  Asymmetrical Lanceolate Biface:  FiQq-8/103
C  Asymmetrical Ovate Biface:  FiQq-15/49
D  Bifacially Marginally Retouched Flake:  FiQq-16/29
E  Ovate Biface:  FiQq-15/48
F  Unnamed Contracting Stemmed Projectile Point Base:  FiQq-11/39
G  Retouched Flake:  FiQq-13/2
H  Scraper-Plane:  FiQq-8/105
I  Endscraper:  FiQq-17/1
PLATE 21
STONE TOOLS FROM SITES ADJACENT TO THE PARK

A  Hanna Atlatl Point: FhQk-2/4
B  Besant Atlatl Point: FiQk-5/1
C  Unnamed Stemmed Type "B" Atlatl Point: FiQk-8/1
D  Unnamed Stemmed Type "B" Atlatl Point: FiQk-4/13
E  Broken Lanceolate Atlatl Point: FiQk-4/59
F  Plainview Base Fragment: FhQk-3/2
G  Unclassifiable Large Point Body Fragment: FhQk-3/3
H  Unmodified Endscraper: FiQk-4/58
I  Lateral Edge Modified Endscraper: FiQk-6/30
J  Dorsally Modified Endscraper: FiQk-6/5
K  Lateral Edge Modified Endscraper: FiQk-6/4
L  Lateral Edge Modified Endscraper: FiQk-6/9
M  Biface Fragment: FjQl-1/1
N  Uniface: FiQk-4/7
O  Asymmetrical Triangular Biface: FiQk-6/33