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CARRIER SETTLEMENT AND SUBSISTENCE IN THE
CHINLAC/CLUCULZ LAKE AREA OF CENTRAL
BRITISH COLUMBIA

by

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ABSTRACT

This thesis examines Carrier settlement and subsistence patterns within a study area near the confluence of the Stuart and Nechako Rivers, and around Cluculz and Cobb lakes. The Carrier site at Chinlac, excavated by Charles Borden in 1950 and 1952, is important to this study and is re-examined in terms of hypothetical models which are developed to explain settlement and subsistence in the late prehistoric period, the protohistoric period, and the early historic period. In particular, a settlement system is proposed for the protohistoric period in which there are two major elements, or locations where settlement occurred, and these are at the confluence of the Stuart and Nechako Rivers and on the north shore of Cluculz lake near the outflow. In the former location, salmon were harvested, and in the latter, lake resources were harvested. The salmon procurement sites were occupied from July to November, and the lakeside locations were used for the rest of the year by the same group of people. A smaller population, different exploitive technology, and smaller archaeological sites are predicted for the late prehistoric and historic periods.

The models proposed in this thesis are based on environmental, ethnographic, and historical research. In the case of the latter, the original fur traders' accounts from Fort St. James and Fort Fraser were consulted and the information used to determine changes in settlement and subsistence over time.

In general, the study adhered to the direct historic approach tempered with a cultural ecological perspective.

In order to verify the proposals made in the thesis, the materials and records of Borden's Chinlac excavation were re-examined, and an archaeological survey of the study area was conducted. The data tend to support the hypotheses put forward but not all could be fully tested. Artifacts from the Chinlac site confirmed that the site was occupied during the protohistoric period, and faunal remains, house type, and other indicators make a summer/ fall occupation of the site probable. Archaeological survey found 37 archaeological sites grouped in several areas. The relatively larger sites were located either at the confluence of the rivers (at and near Chinlac) or at the outflow of Cluculz Lake. Smaller sites were scattered along the north shore of the lake, along the river banks, and elsewhere. On the basis of this data, it is concluded that the two element (binary) settlement system is appropriate for the protohistoric period.

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I wish to pay tribute to the late Dr. Charles Borden whose pioneering work in the Central Interior, and at Chinlac, laid the foundation for archaeological study in the region. The clarity of his insight was evident again and again during my research.

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CHAPTER 1

INTRODUCTION

In this study I have attempted to locate and describe archaeological sites which are elements in settlement and subsistence systems developed by the Carrier people who occupied the site at Chinlac (designated GaRv 1 by Borden) during the protohistoric period. In addition, I have described some of the changes in land use which had occurred around Chinlac during the late prehistoric and historic periods and have established a basis for a local developmental sequence. I chose a study area centering on Chinlac and parts of the Nechako and Stuart Rivers, Cluculz and Cobb Lakes, and Cluculz Creek (Figure 1.) for several reasons. First, the study area contains locations where two ethnographically important resources are available, and these are separated by enough distance to make exploitation of both resources from one camp difficult; I expected that at least 2 functional site types would result. Also, some of the Carrier Indians from Stoney Creek hunted and fished in the area in recent times (they are probably descendants of the inhabitants of Chinlac), so land use in later periods could be evaluated. Finally, the area was small enough that a survey which could only last 2 months might be reasonably expected to find most of the archaeological sites present .

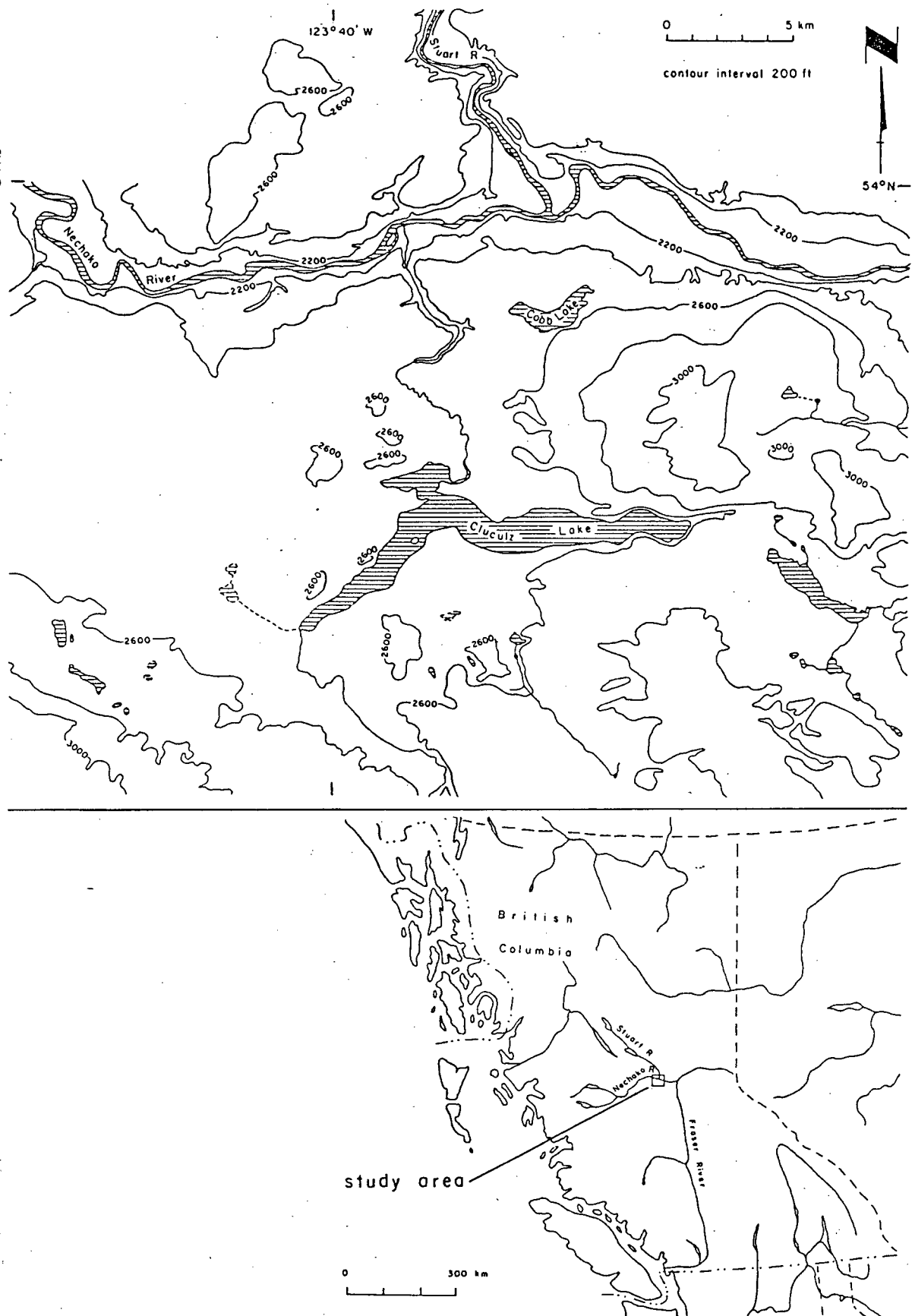


Figure 1. Location of the Study Area, Confluence of the Nechako and Stuart Rivers. British Columbia.

Central to the area, in a geographical and problematic sense, is Chinlac. Of interest partly because it is the best reported site in the area and partly because Morice (1978:14-16) described the destruction of the village by the Chilcotin ca. 1745 in his History of the Northern Interior of British Columbia. The site was excavated by Borden in 1950 and 1952 (1952) and placed by him in the late prehistoric period and early contact period. The importance of Chinlac, at some time in the past, is indicated by both the size of the site itself (approximately 400 x 100 m) and the size of the 10 rectangular house features on the site (averaging 8 x 13 m). Borden (1952:32) identified the latter as house depressions. The site is also located along a portion of the Stuart River where a salmon weir could be efficiently used.

Although Borden established that Chinlac was occupied for approximately 100 years beginning about A.D. 1700, there are questions about the site which have yet to be answered. For example, Borden implied that salmon procurement and processing took place there but a specific season for occupation was not suggested (1952: 32-34). One may infer that Borden thought that a permanent, and generally non-seasonal, occupation was represented at Chinlac. In this thesis, I present an alternative scheme for consideration based on the idea that Chinlac was occupied during the salmon season, and that sites on Cluculz Lake (10 km south) were occupied by the Chinlac people for the rest of the year. While salmon was a principal resource, it is certain that lake fish were also

of considerable importance (Hudson 1983:58-61). I also suggest here that the resource base available to the people at Chinlac, at the site, made occupation by a large group year after year was unlikely. The salmon run fluctuates dramatically and the fish may not have been plentiful enough to to sustain a semi-sedentary occupation in some years, as I will show.

The fact that Borden was able to confirm that Chinlac was abandoned at the end of the prehistoric period meant that the written records available for the area might contain important settlement and subsistence information which could be used in its interpretation . Fur trade documents from Hudson's Bay and Northwest Company posts nearby, dating from 1806, are most important in this regard. With historical and ethnographic sources available, the direct historical approach seemed an appropriate strategy for this investigation as it involves " working back in time from a known ethnographic base (Matson et al 1980: 129)." An added justification for the method is that Borden used the direct historical approach in his original work on the Chinlac site (Carlson 1979: 234). A cultural ecological perspective is also necessary because site distribution may be better understood through consideration of the local resource base and aboriginal use. Glock (1985: 465) defines cultural ecology as a perspective for regional investigation.

Cultural ecology (Netting 1977) is the anthropological framework within which archaeologists formulate research questions involving the disposition of sites on a landscape and their levels of interdependence.

Butzer (1982 :6) provides a goal for archaeological studies which stress evaluation of the environment.

Thus, the primary goal of environmental archaeology should be to define the characteristics and processes of the biophysical environment that provide a matrix for and interact with socio-economic systems, as reflected, for example, in subsistence activities and settlement patterns.

Having established a focus for the study, I pursued its goals through archaeological survey, and an evaluation of local environmental factors such as resource availability and seasonality, hoping these would suggest site functions which could be supported by historical and ethnographic research. Given the distribution of resources within the study area, I decided that a settlement and subsistence system with two major nodes or elements might have existed in the protohistoric period, and that the distribution of archaeological sites would reflect this. In the absence of any other significant resource concentration, other sites were either satellites of one node or the other, at least during the period when Chinlac was occupied, or can be explained in the context of models for the late prehistoric and historic periods.

Hypotheses

I stated that I thought it probable that Chinlac was occupied only during the salmon season and that the inhabitants probably lived on Cluculz Lake at other times. Many ethnographically important resources can be procured at the lake, which is close by and relatively large, in the fall

and spring of the year. Early in the investigation, I decided that fish would probably spawn near the outflow of the Lake and several species could be taken there in large numbers at those times. Also, the location was an ideal site for a winter village because it was on the north shore facing south, an advantage in the winter, and the inhabitants could fish through the ice to supplement stored foods. Preliminary research seemed to confirm my analysis. I proposed the following specific hypotheses to guide my research , although not all could be formally tested:

1. I predict that during the protohistoric period, when Chinlac was occupied (Borden 1952: 34), the inhabitants of the site moved to the north shore of Cluculz Lake in the fall (late November) to catch whitefish and char, and in the spring (May through June) they caught suckers, chub, and trout at the same location. This pattern is not inconsistent with that described by Morice (1893:184). Chinlac was occupied during the salmon season. Within the study area then, archaeological sites are concentrated in two locations, reflecting dependence on two major resources. One group of sites is situated near the confluence of the Nechako and Stuart Rivers; the other group of sites is situated at the outflow of Cluculz Lake. The largest archaeological sites in the area are found at the two locations.

2. On the Nechako and Stuart Rivers, smaller archaeological sites will be found near riffles and eddies where traps,

spears, and nets could be used to take salmon (see Morice 1893: 71, 87-90). On Cluculz Lake and elsewhere in the study area, smaller sites will be found near places where less important resources such as char could be caught. Sites on the shores of smaller lakes are probably small.

3. Since salmon numbers fluctuated during the natural cycle, it is quite possible that there were too few fish to sustain a large number of people in some years. At such times, Chinlac was abandoned and some individuals and families left the area until conditions were better. This would be consistent with the patterns reported by Hudson (1983: 80) for the Carrier.

4. Because the same group of people lived at Chinlac and at the outflow of Cluculz Lake and frequently travelled between the locations, trails link the river sites with the lake sites. Morice (1978) has mapped trails used by the Carrier in New Caledonia. One would also expect that other trails exist which provided communication links with Carrier to the west and east.

The hypotheses relate specifically to the protohistoric period because Chinlac has been assigned to that time. However, I do address both the historic period and the late prehistoric period in the thesis and I see both as times of less intensive use of the area. As I shall explain, the sites from the earlier and later periods are expected to be smaller, reflecting a society which was different from that

which existed during the protohistoric period, and a lower population. As the distribution of resources limits the options available to the aboriginal inhabitants of the area, I anticipate that sites from all three periods will occupy the same locations, but that the protohistoric settlement system will be easiest to reconstruct from survey because it would be at this time that the important resource locations were used by the largest number of people. On the other hand, the historic period is easiest to reconstruct through historical and ethnographic research.

Methodology

The achievement of research goals, which include description and explanation of changes in site use within the study area through time, required that I follow several lines of investigation.

1. Expecting to find a correlation between resource distribution and site distribution, I evaluated the resource base and mapped resources for the study area. As I will explain in my discussion of the environment in Chapter Two, the resource base is not very broad and subsistence depends on relatively few species (Morice 1893: 84,93, Hudson 1983:58-61). I expected to find only a few significant resource concentrations , primarily of fish species.

2. I undertook a survey of the waterways and lakeshores in the study area because the Carriers depended upon fish for subsistence and tended to live near water (Hudson 1983 :58,

Morice 1893:184). Helmer (1975: 79-80) during his survey of the Blackwater Valley, to the south , followed waterways because of this. Site survey is an important step in any areal archaeological study and may be planned to accord with perceived subsistence possibilities (Butzer 1982: 258-259) and known ethnographic patterns (Helmer 1975).

3. I examined the excavation records and excavated materials from Chinlac in an attempt to extract information about site function and use and I also wanted additional information on the protohistoric period of occupation. I was particularly hopeful that seasonality indicators might be present and that evidence for periodic abandonment might also be found. Specifically, faunal remains might indicate season of use and other evidence for site function might have been uncovered which could be supported with ethnographic or historical information . Interruptions in deposits might indicate periodic abandonment. Also, changes in artifact distribution and posthole placement from one archaeological level to the next might indicate a non-continuous occupation.

4. I examined historical documents in the Hudson's Bay Archives which might elucidate Carrier settlement and subsistence patterns during the early historic period. Fur trade documents contain many references to the activities of the Carrier and I hoped for specific mention of Chinlac. The most relevant documents are from the early years of the trade (1806 to 1840) in New Caledonia. The original records of the Hudson's Bay Company for the area include records, accounts,

reports, and correspondence from the posts at Fort George (at the confluence of the Nechako and Fraser Rivers) , Fort Fraser (at the east end of Fraser Lake), and Fort St.James (at the southern end of Stuart Lake) (Figure 2.). The journals of Simon Fraser (Lamb, 1966), Alexander Mackenzie (Lamb 1970), Daniel Harmon (Lamb, 1957), and John McLean (1932) are also valuable . George Dawson's report on his geological survey of the interior of the province (1878) has some information also.

5. I undertook ethnographic research, which included interviewing Carrier elders from Stoney Creek, in the hope that I might be helped to understand resource use and settlement during earlier periods. Several of the elders have fished or hunted within the study area; in some cases, they remembered who had owned resource locations in the past . I anticipated that important information on the seasonal use of some locations would be gained. Although the study area itself is not well known from previous research, several important ethnographic works are available for the Carrier. The writings of Father A.G. Morice, including The History of the Northern Interior of British Columbia (1906) and Notes Archaeological, Industrial, and Sociological on the Western Dene (1893) are good sources of information. Additional ethnographic data is provided by Jenness (1929, 1932, 1943) for the western Carrier groups. Duff (1952) has written on the Carrier of Cheslatta Lake, Stoney Creek, Fraser Lake, and Fort Fraser. The culture of the Alkatcho Carrier was reported by Goldman (1940, 1941). More recently, Kew (1974) has

written of the people of the Nazko-Kluskus area. Hudson (1972, 1983) has studied the Upper Carrier of Stuart Lake. Tobey (1981) has summarised the various ethnographies available on the Carrier. Steward (1970) wrote an analysis of the cultural ecology of the Stuart Lake people and Bishop (1979) wrote of Carrier social ranking within a historical context.

6. I examined reports of other archaeological investigations which had taken place in the central interior so that I might generate archaeological expectations for this study although, it must be said, very little archaeological investigation has occurred within the region. The only professional excavation and analysis of a site in the study area was that carried out by Borden at Chinlac Village (Borden 1952). Magne (1984) examined the Chinlac collection more recently, and, in 1981, I also worked on the materials (n.d.). An amateur, Jack Sewell (1952), attempted to describe the archaeological resources of the region . Until my own investigation, no systematic archaeological survey had been attempted, and few sites were known. However, studies have been undertaken in nearby areas and some reporting has been done.

As part of the project which included the excavation at Chinlac, Borden (1952) excavated sites on Nataalkuz Lake to the south where he found evidence there of an earlier and apparently non-Athapaskan occupation. Helmer (1975a) surveyed the Blackwater River Valley, approximately 75 km south of the study area, for the Archaeological Sites Advisory Board of British Columbia; he described site distribution there and

proposed three phases for Carrier culture , beginning with the patrilineal band and ending with the nuclear family (1977a: 77). In another work, Helmer (1977b: 90-97) synthesised culture history for the central interior.

Further to the south and west, Wilmeth excavated sites near Anahim Lake where he found a protohistoric occupation and two other components (Helmer 1977b: 63) A protohistoric Athapaskan occupation was isolated at Nadsaldalia Crossing by Mitchell (Helmer 1977a: 64). Based on excavations at Tezli and Ulgatcho, Donahue (1975) suggests a continuous cultural tradition for the Athapaskans beginning approximately 2400 B.C. and ending in the historic period. Occupation of the the Punchaw Lake Site (to the east and south of the study area) for more than 4500 years is indicated by Fladmark (1976) and by Helmer and Wilson (Helmer 1975a: 65). Athapaskan sites where protohistoric and other late occupations were found are of most interest to this study because they can be compared with Chinlac. Hudson (1972) has examined a site at Westlake near Prince George.

Thesis Outline

In keeping with the direct historical approach, I will discuss the Central Carrier as they are known ethnographically before I present models for the historic, protohistoric, and prehistoric periods (in that order). I have, therefore, organised the thesis in the following manner . I have already mentioned that I believe that a correlation exists between the local settlement pattern, and resource

distribution, availability, and seasonality. In Chapter Two, I describe the local environment in detail and catalogue the resources available to the area's human inhabitants, and I examine fluctuations in the availability of salmon which may have caused problems for the inhabitants of the area.

In Chapter Three, I summarize pertinent ethnographic information which is later used to generate hypothetical models for the archaeological periods under discussion, and I present information about more recent native land use within the study area, derived from my own interviews with Carrier elders at Stoney Creek. The settlement and subsistence activities of the Carrier are presented here and a description of fishing and hunting practices is given; house styles are also described. A brief description of intergroup trade and kin networks is included in this chapter.

Chapter Four examines settlement and subsistence during the historic period and contains an evaluation of the direct and indirect effects of the fur trade on the Carrier lifeways within the study area. I also suggest how land use during the historic period might be represented in the archaeological record. I present a model for the protohistoric period in Chapter Five and for the late prehistoric period in Chapter Six, based on descriptions from elsewhere and upon the suggestions of other researchers who have attempted to explain culture change during those times. Specific archaeological expectations are also presented in the chapters.

Chapter Seven consists of a re-examination of the Borden excavation of House III at Chinlac in light of research into historical sources and environmental factors. Archaeological survey conducted as part of research for this thesis is discussed in Chapter Eight. I describe the survey rationale, methodology, and results, relating the latter to archaeological expectations generated by the 3 models presented in previous chapters.

The final chapter of this work contains a summary of the thesis, conclusions, and suggestions for future research. I discuss the appropriateness of the hypothetical models in view of the archaeological evidence, and discuss alternate views.

Summary

In summary, a significant portion of the thesis is devoted to the creation and testing of a model for the protohistoric period but models for the late prehistoric and historic periods are also developed and partially tested. An important part of the research consisted of the archaeological survey of a small area which contains concentrations of all important Carrier subsistence items distinctly separated by location and season. The models are further elucidated through archaeological, ethnographic, historical, and environmental research. The excavation results from Chinlac are described so that this protohistoric type site at a salmon procurement location will be known for comparative

purposes, and also to test the proposal that the site was seasonally occupied. The direct historical approach and a cultural ecological perspective provide the conceptual framework for these investigations.

CHAPTER 2

THE ENVIRONMENT

Introduction

An important first step in the reconstruction of settlement and subsistence patterns is the description and analysis of the natural environment inhabited by the group under study (Jochim 1979: 224; Bettinger 1981:158; Binford 1983:38). In this chapter, I present a overview of the natural setting within the study area and discuss specific features of the environment relevant to the investigation. In particular, I describe the location of resource concentrations and the seasonality of resources which were ethnographically important to the Central Carrier. In a separate section, I examine the salmon resource and discuss its limitations and importance.

I make the assumption that many archaeological sites will be accessible to resource concentrations at specific times of the year. While I do not adhere to Optimal Foraging Theory here, some observations made by those who support this perspective are useful. For example, Moore (1981:200) states,

In models that deal with a heterogenous environment, the optimization strategy maximizes the net energy return by feeding in dense resource patches...Thus optimal behaviour is strongly affected by the distribution of resources in time and space.

The environment under investigation did not present its inhabitants with uniform distribution of resources. In biogeographer's terms, the human/ environment relationship is "patchy" or "coarse grained" (Kirch 1982: 124). Moreover, as I hope to show in later chapters, Central Carrier subsistence largely depended upon a few species of fish. Many minor resources were exploited but these tended to supplement the major items. In many accounts and studies, salmon is considered the key resource and all others are ancillary (Steward 1970:207-8; Hudson 1983: 57,58,84). However, salmon is not a reliable nor abundant resource most of the time in this area (Hudson 1983:67) and its importance within the study area may be easy to overstress. An assumption of the absolute primacy of salmon may lead to the creation of a hierarchy of sites related to the perceived importance of various species to subsistence which may not reflect reality. Obviously, a comprehensive, unbiased examination of the environment is warranted.

The Natural Setting

The study area is in the geographical center of the province of British Columbia and is situated on the Interior Plateau as described by Holland (1964: 68). Plateau terrain is rolling (rugged in many places) and has areas of low mountains and hills. The Telegraph Range to the south of the study area has mountains which are in excess of 1000 m in elevation but overall the region is not truly mountainous.

There are regions of low-lying plains and basins, of which the most extensive are the Fraser Basin and the various components of the Nechako Plain. The greater part of these are the remains of outwash plains and lake bottoms created as the last of the Pleistocene ice retreated (Tipper 1963:12).

The study area encompasses both hilly areas and occasional areas of flat, level plain. Evidence of glaciation in the form of eskers, moraines, outwash plains, and kettle lakes is abundant. The present drainage is poorly organised with the result that swamps, shallow lakes, and wet meadows are common. Deposits of glacial materials are usually deep and bedrock is not commonly exposed (Tipper 1963: 6-15). There are no known locations within the study area where tool-quality basalt may be found.

The confluence of the Stuart and Nechako Rivers lies within the Sub-boreal Bio-climatic Zone (Krajina 1959: 17,18,38-41) although there are vestiges of Cariboo Parkland featuring Douglas fir (Pseudotsuga menziesii) and other plants belonging to that regime. According to technicians with the local branch of the Ministry of Forests, these stands seem to have an age of 300 years or so. This may indicate a warmer climate at about A.D. 1700 , although its effect on native settlement and subsistence in the region is unknown.

The dominant plants belong to the Sub-boreal Zone with white spruce (Picea glauca ssp. glauca), lodgepole pine (Pinus contorta latifolia), and Englemann spruce (Picea

glauca ssp. engelmanni) being the prevalent conifers. The forest also features trembling aspen (Populus tremuloides), willow (Salix sp.), northern black cottonwood (Populus trichocarpa), and white birch (Betula papyrifera). Species of alder (Alnus) and the tamarack (Larix) also occur in spots (Lyons 1952: 16-42).

Many varieties of shrub and low-lying plants occur and some of these were utilised by the Carrier. The huckleberries and blueberries (Vaccinium sp.) are common and so is the saskatoon berry (Amelanchier sp.). Soap berry (Shepherdia canadensis), raspberry (Rubus sp.), and wild strawberry (Fragaria sp.) can be found. The wild rose (Rosa sp.) and the stinging nettle (Urtica lyalli) are also common. In addition to trees and bushes, many species of grass and flowering plants are native to the area but few are mentioned in ethnographic accounts which deal with the economic activities of the Carrier.

The climate of the Central Interior is not overly severe but extremely cold days may occur in mid-winter. Although the summers are cool and light rain comes often, total precipitation is not high. Norman Green of Vanderhoof who has kept weather records for the town for many years has provided the following data which have been compiled over a 65 year period beginning in 1920. Vanderhoof is approximately 60 km from the confluence of the Stuart and Nechako Rivers so the data are a fair representation of climate in recent years in the study area.

Table 1 - Climate Summary for Vanderhoof, B.C.

Mean Temp			Records		Precipitation			Days with Precip.		
Yr.	Ja.	Ju.	H	L	Rn	Sn	Tot	Rn	Sn	Tot
2.5	-13.1	14.5	40	-51.7	263	197	460	76	47	122

Note: Temperature is given in degrees celsius; precipitation is in millimeters

Temperatures are moderated occasionally by winds from the coast and climate is classified Humid Continental (Tipper 1963: 2). Valley bottoms and north-facing slopes are known to remain colder longer (Chinlac faces northeast), although there are no local figures available to quantify these physiographic factors. It is possible that the climate was getting colder in late prehistoric and early historic times. Hudson (1983: 45) states that the area was much colder between 1750 and 1850, which would presumably be an important time period for Chinlac as I will later explain. John Stuart, an associate of Simon Fraser and later superintendent of New Caledonia, remarked in 1822,

... but the cold I believe is fast increasing;
In (sic) 1806 ... to 1812, the winters were so
very mild (HBCA B.188/e/1 fo. 2d-3).¹

As mentioned, the area is not overly rich in resources

1 HBCA indicates Hudson's Bay Company Archives, B.188/e/1 is a Hudson's Bay Company Archive call number (Report for New Caledonia: 1822-23), Folio (fo.) numbers rather than page numbers are given, 'd' is the back of the folio 'page'.

although a number of species of wildlife is present. Noting the general scarcity of land animals in his Report for 1823 (HBCA B.188/e/1 fo. 4) , John Stuart wrote

There are few animals of the large kind to be met with in New Caledonia nor are those of the fur kind either very numerous

and

... for so scarce are the animals that excepting at the public feasts given in honour of the dead, nine tenths of the people do not taste meat perhaps not once in ten years...

In historic times at least, subsistence depended upon fish with other resources occupying a less important place (HBCA 1822-23:B.188/e/1 fo.3d-4d). Today, moose (Alces alces) is the largest animal in the Central Interior and is hunted by both whites and natives. The moose was almost completely absent from the area prior to 1920 (Cowan and Guiget 1973: 376). The mule deer (Odocoileus hemionus hemionus) is relatively common and its range appears to be expanding as a result of increased land clearing which opens up new habitat. Caribou (Rangifer tarandus montanus) were formerly found to the south (in the Cheslatta Lake area) and to the north of Stuart Lake but are no longer present nearby (Hudson 1983: 45). These were hunted by some individuals but, judging from comments in post records, were never really common (HBCA B.188/b/2; HBCA B.188/a/1).

Both the black bear (Ursus americanus) and the grizzly bear (Ursus horribilis) were hunted (Morice 1893: 94). The porcupine (Erethizon dorsatum) is common. In recent times, at

least, the coyote (Canis latrans) has been found throughout the region. The red squirrel (Tamiasciurus hudsonicus) is widespread and varying hares (Lepus americanus) are seen from time to time. The marmot (Marmota sp.) is found in rocky areas and these were hunted by the Carrier (Morice 1893: 93).

There are a number of species of fur bearers which were important both to the Carrier and to the early European traders. Wolf (Canis lupus) and lynx (Lynx canadensis) are not uncommon. Beaver (Castor canadensis), muskrat (Ondatra zibethica spatulata), marten (Martes americana), fisher (Martes pennanti), mink (Mustela vison), wolverine (Gulo luscus), river otter (Lutra canadensis), weasel (Mustela sp.) and fox (Vulpes fulva) are all found within the study area and are listed by Morice (1893: 91-92). Historical records (HBCA B.74/a/1 fo.38) indicate that the Carrier kept small dogs (Canis familiaris).

A variety of bird species, both resident and migratory, inhabit the Nechako/Stuart region and many were important to native subsistence. Resident species include the ruffed grouse (Bonasa umbellus), spruce grouse (Canachites canadensis), and the blue grouse (Dendragapus obscurus). The trumpeter swan (Olor buccinator), a species hunted by the Carrier (Morice 1893: 104-5), can be considered resident as flocks of these birds regularly winter where there is open water on local rivers.

The canada goose (Branta canadensis) is a common visitor in the early spring and fall when flocks pass through following the interior flyway. A number of species of ducks

and teal nest in the area including mallard (Anas platyrhynchos), teal (Anas sp.), redhead (Aythya americana), and goldeneye (Bucephala sp.). The loon (Gavia immer), grebes (Podiceps ssp.) and other water birds are present and were important sources of food (Morice 1893: 107) The sandhill crane (Grus canadensis) and the bald eagle (Haliaeetus leucocephalus) are two birds which seem unlikely food items but are mentioned as such in post records (HBCA B.188/a/1). I have not listed the many species of songbirds which frequent the area because they do not appear to have been regularly taken for food.

There is ample testimony to the fact that the Carrier depended heavily upon the resources of river and lake. Salmon were extremely important and will be discussed in detail below. The sockeye (Oncorynchus nerka) was the most important species but chinook (Onchorynchus tshawytscha) also ascend the Stuart and Nechako although in lesser numbers than the sockeye (Morice 1893: 84).

While salmon is the principal resource of the Nechako and Stuart Rivers, other fish species are also present in the area. The kokanee (Oncorynchus nerka) is found in many interior lakes but it seems to have been a late transplant in Cluculz Lake (see below). Char (Salvelinus namaycush) is found in Cluculz Lake and rainbow trout (Salmo gairdneri) and dolly varden (Salvelinus malma) are common in the rivers and many lakes. The white sturgeon (Acipenser transmontanus) occurs in the Nechako and Stuart Rivers. Suckers (Catostomas

sp.), squawfish (Pytchocheilus oregonensis), peamouth (Mylocheilus caurinus) , mountain whitefish (Prosopium williamsoni), lake whitefish (Coregonus clupeaformis) and burbot (Lota lota) are all found in local streams and lakes.

The Distribution and Seasonality of Resources Other Than Salmon

As I have indicated, the Carrier depended largely upon fish for subsistence and it is fish which are most likely to provide a key to reconstructing past settlement patterns. Within the study area, fish are found in the Nechako and the Stuart and their tributaries (which are all very small), and in Cluculz and Cobb Lakes and their tributary and outflow streams (also small)(Figure 3). Fish are available in large numbers in the lakes and creeks at different periods than they are in the major rivers. As no scheduling conflict would be present, the lake and river environments may be treated as separate units in the reconstruction of settlement/subsistence patterns. Writing about native food fishery in the Great Lakes, Cleland (1982: 768) gives what I consider to be a good generalisation for northern lakes.

Although dispersed and unavailable for most of the year, fish were a high quality food available in tremendous quantities at specific times. Availability was regular, predictable, and centered on the spring and fall spawning periods. This cycle becomes the key to understanding the evolution of subsistence and settlement systems of the upper Great Lakes Indians.

Of the two lakes mentioned, Cluculz Lake is the largest

and was the most important for subsistence, according to native informants. I was told that several small lakes outside the study area were visited by the people from Stoney Creek but , in general, these seem to have been of minor importance. In any case, camps at these lakes would probably be satellites of the Cluculz Lake camps in earlier times, as I hope to show.

Cluculz Lake lies approximately 10 km south of the confluence of the Nechako and Stuart Rivers (where Chinlac is located) (see Figure 1, page 2). The lake is approximately 16 km long and is approximately 2 km across at its widest point. Cluculz Lake is relatively deep with a maximum depth of 60 meters. There are several creeks feeding into the lake but these are all small; the outflow is the largest stream and flows out of a large shallow bay on the north side. Generally, the lake is shallower on the north and west, and deeper on the south and west with the result that the best locations for taking spawning fish are on the north shore and at the west end, although char probably spawn in deeper areas on the northeast and southern shores (Brenda Dixon, pers comm).

The list below, provided by the Fish and Wildlife Branch of the Department of the Environment in Prince George, contains all species of fish now present in Cluculz Lake.

rainbow trout	(<u>Salmo gairdneri</u>)
lake char	(<u>Salvelinus namaycush</u>)
dolly varden char	(<u>Salvelinus malma</u>)
lake whitefish	(<u>Coregonus clupeaformis</u>)
mountain whitefish	(<u>Prosopium williamsoni</u>)
largescale sucker	(<u>Catostomus macrocheilus</u>)
longnose sucker	(<u>Catostomus catostomus</u>)
white sucker	(<u>Catostomus commersoni</u>)
redside shiner	(<u>Richardsonius balteatus</u>)
squawfish	(<u>Pytchocheilus oregonensis</u>)
peamouth chub	(<u>Mylocheilus caurinus</u>)
lake chub	(<u>Couesius plumbeus</u>)
burbot	(<u>Lota lota</u>)
kokanee	(<u>Oncorhynchus nerka</u>)
prickly sculpin	(<u>Cottus asper</u>)

According to Brenda Dixon, biologist with the Fish and Wildlife Branch in Prince George, there is reason to believe that kokanee were introduced into the lake about 30 Years ago and so might not have been a susistence item in earlier times. Dolly varden are not common in the lake at the present time and set nets several years ago yielded only one fish (Brenda Dixon, pers comm).

The fish in Cluculz Lake spawn in the fall and in the spring. With the exception of char, as I pointed out, all species spawn in shallow water. The most important spawning areas are in the bay on the north shore of the lake and in Cluculz Creek. Also, spawners tend to congregate in the bay before entering the creek (Brenda Dixon, pers comm). Some sucker and trout spawning may take place at the west end of the lake but no one seems to know for sure. It is almost certain that burbot go to that end (Brenda Dixon, pers comm). Incidentally, waterfowl do visit the west end of the lake; one might speculate that the swampy areas there may have been shallow lake in past times and more birds may have been

present. Locations where resources are concentrated are shown on Figure 3 .

Resources Available in Fall on Cluculz Lake

Several fish species of importance to native subsistence spawn in the fall including the char which spawns in October and November in deep areas of the lake where there are submerged rocks and large boulders (Brenda Dixon, pers comm). The whitefish also spawn in the fall and large numbers were netted by native people until the government prohibited this activity in the 1950's. It is uncertain if both species of whitefish are present in the lake but they probably are (Brenda Dixon, pers comm). The mountain whitefish (Prosopium williamsoni) spawns in lake shallows or stream gravels in late fall and lake whitefish (Coregonus clupeaformis) spawn in November and December in shallow water (Scott and Grosman 1975: 271,293). Later, when the lake froze over, trout and other fish could be caught with hook or net through holes in the ice (Morice 1893: 72).

Resources Available in Cluculz Lake in Spring

In the spring, suckers are more plentiful than any other fish. The three species present in the lake are abundant in Cluculz Creek and in the large bay on the northern shore of the lake during the spawning period. Suckers were an important food source ethnographically (Hudson 1983: 64). Not all species of suckers spawn at the same time. The

longnose appears first beginning in mid-April; the white sucker follows some days later; the largescale sucker comes into the creeks around the beginning of May. In some streams 500 or more fish may pass a single point in a few minutes , so the resource is substantial (Scott and Grossman 1975: 531-547).

The Carrier used small fish, called 'thelmek', as food (Hudson 1983:60). The exact species is not known but it is likely that the fish were chub or shiners. All species of chub and shiner in Cluculz Lake spawn in the late spring and early summer , probably in the bay on the north shore of the lake (Brenda Dixon, pers comm). The squawfish (Pytchocheilus oregonensis), a large species of chub also spawns in the same area at around the same time. As I can personally testify, char enter shallow waters to feed on smaller fish as soon as the ice is out in the spring. Whitefish also tend to move into shallower waters during the early spring (Scott and Grossman 1975: 272). The appearance of these two fishes tends to compound the resource base. At the same time as other species are in the bay and in Cluculz Creek, rainbow trout are entering the creek to spawn and are present from late April to Late June (Scott and Grossman 1975: 187).

Cobb Lake

Cobb Lake lies approximately halfway between the Chinlac site and Cluculz Lake (Figure 3). The lake is small (3 km long and 1.1 km wide), shallow (approximately 7 to 9 meters

deep), and it is fed by one small intermittent stream and drained by another. There are only three species of fish present but one (brook trout) was introduced in 1984. There seems to be a good sucker population (exact species unknown); Fish and Wildlife caught 1800 fish in four net sets a few years ago. Lake chub (Cousieus plumbeus) is also abundant. Both species spawn in the spring in the shallow water at the west end and near the inflow and outflow of the lake (Brenda Dixon, pers comm). Cobb Lake is also visited by waterfowl and, local residents say that both black bear (Ursus americanus) and grizzly bear (Ursus horribilis) frequent the area.

Salmon as a Resource

As mentioned, the Stuart and Nechako Rivers are visited by sockeye (Oncorhynchus nerka) and chinook salmon (Oncorhynchus tshawytscha). Of the two species, the sockeye were easily the most important to subsistence (Hudson 1983: 168). There are presently two runs of fish into the river; the early run, which was not significant prior to 1894 (Hudson 1983: 169), has entered the Stuart as early as July 12; the later run has entered the river as early as August 3 and as late as Sept. 8. Between 1938 and 1975, the maximum number of fish produced by the entire Nechako system was 865,000 in 1956. In 1957, the most productive year between 1938 and 1975, 531,000 fish entered the Stuart. This compares with approximately 1500 fish in 1956 and 23,638 fish in 1958 (Sockeye

Salmon Studies on the Nechako River 1979 : 5). I estimate that the salmon would be gone from the lower Stuart near Chinlac by the third week in September (Morice 1893:184).

The Chinook enter the Nechako in August and spawn in the rivers in September. Current production (1983) on the Nechako system is 12,600 fish but it is estimated that the streams could produce 45,000 fish (Department of Fisheries and Oceans 1984: v). The Chinook are larger fish than the Sockeye.

The salmon have been greatly affected by damage to the Fraser watershed streams in the recent past. In 1913, a rock slide blocked the salmon at Hell's Gate , a situation which was not rectified until a fish ladder was constructed in 1945 (Hudson 1983: 108). Alcan's Kemano project has had severe effects on salmon production. During the period when the reservoir created by the Kenny Dam was being filled (1952-1957), virtually no water was released into the Nechako and since that time, salmon have been subjected to abrupt, artificial, changes in water level (Department of Fisheries and Oceans 1984).

I have indicated above that it may be easy to overgeneralise about the nature of Salmon as a resource. While there is no doubt the fish was important as a food source to the Carrier, it is subject to cycles which make it a less than perfect staple. As Sneed (1971: 234) has pointed out,

This irregularity (cyclical nature of salmon) would not be so important in areas like the lower Fraser Valley where all five salmon species occur, but in the Nechako River Valley where only limited numbers of two species occur, this cyclical irregularity would be felt by human populations. Finally, the nutritional value of the various fish decreases as the distance of the run from the ocean increases.

In sum, the ecological value (i.e. the carrying capacity) of a given stretch of streams used by aboriginal fisherman depended on the quantity and quality of the salmon runs and this depended on location, seasonality, and cyclical fluctuations.

According to Hudson (1983: 106) , the salmon which go up the Nechako have peak runs every four years on the 1902 line whereas the Stuart run peaks on the 1901 line. This means that a peak run would have occurred in 1897, 1901, and 1905 on the Stuart. On the Nechako, the peak would have come in 1898, 1902, and 1906. However, poor runs often overlap . In 1822, the runs into Fraser Lake and into Stuart Lake were very small and starvation was common throughout the district (HBCA B.188/a/2 fo. 56d). The effects of the failure of the runs are well documented (Hudson 1983: 67-69,80) with one result being an increased dependence upon lake resources , a point which has relevance to this thesis. I suggest that subsistence would be much more difficult for the Chinlac people in low years, such as 1822, than in peak years and that lake resources would be correspondingly more important.

The significance of the salmon cycle can be demonstrated for more recent times by plotting the native food fishery. Figure 4. shows the dramatic difference in the numbers of fish taken from year to year.

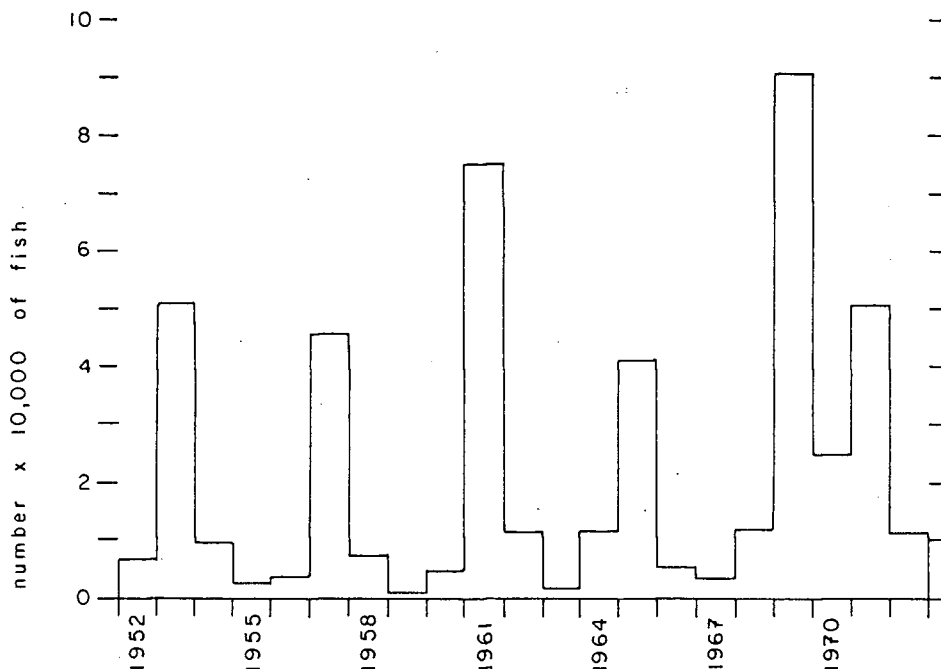


Figure 4. Annual Native Sockeye Fishery on the Stuart River From 1952 to 1972. (International Pacific Salmon Fisheries Commission. 1979:9).

Summary

It is clear that several factors are present in the environment which might have a significant effect on settlement and subsistence patterns. The first , and most important, of these is that important resources occur in two essentially separate locations. The Salmon are available on the Nechako and Stuart Rivers and most other fish utilised by the Carrier are available at the lakes. The separate resources must be taken at the different locations at different times but since distance between Cluculz and Cobb Lakes and the Rivers at Chinlac is not great, and since no

scheduling conflict occurs, this would not be a problem.

Lake fish are available in the spring and late fall; Salmon are available in the late summer and early fall. As I hope to demonstrate in the next chapter, the Carrier depended on both resources to a high degree.

I have alluded to microenvironmental factors elsewhere in this thesis. By this, I mean that some locations may be better suited to human habitation at certain times and not so at others. It may simply be that one location is unpleasant for one reason or another and this may be an important consideration in the choice of habitation site. In this regard, Chinlac is a colder place than the northern shore of Cluculz Lake, and the snow stays at Chinlac longer. This factor, in combination with resource seasonality and distribution, may further help us to understand settlement and subsistence patterns.

CHAPTER 3

ETHNOGRAPHIC SUMMARY

Introduction

An important phase of many archaeological studies is the description and analysis of aboriginal lifeways which existed within the area under investigation. This description is, of course, implicit for studies using the direct historical approach (Matson et al 1980: 12). The study area has been inhabited by the Carrier since before historical records began. In this chapter, I present a brief summary of Central Carrier culture, with specific reference to settlement and subsistence activities. I depend heavily upon the work of Morice (1893; 1978) but refer also to the important research of Hudson (1972; 1983) and others. The hypothetical models presented elsewhere in this thesis are partially based on this summary.

Fur company records contain references to Carrier activities and were used in my reconstruction. I also gained valuable insights into earlier patterns by interviewing Carrier elders at Stoney Creek. Included in this chapter is a brief discussion of intergroup support and trade networks which seem to have been important features of Carrier life in the past.

The Carrier

The Carrier are an Athapaskan speaking people who inhabited the central interior of British Columbia. They are

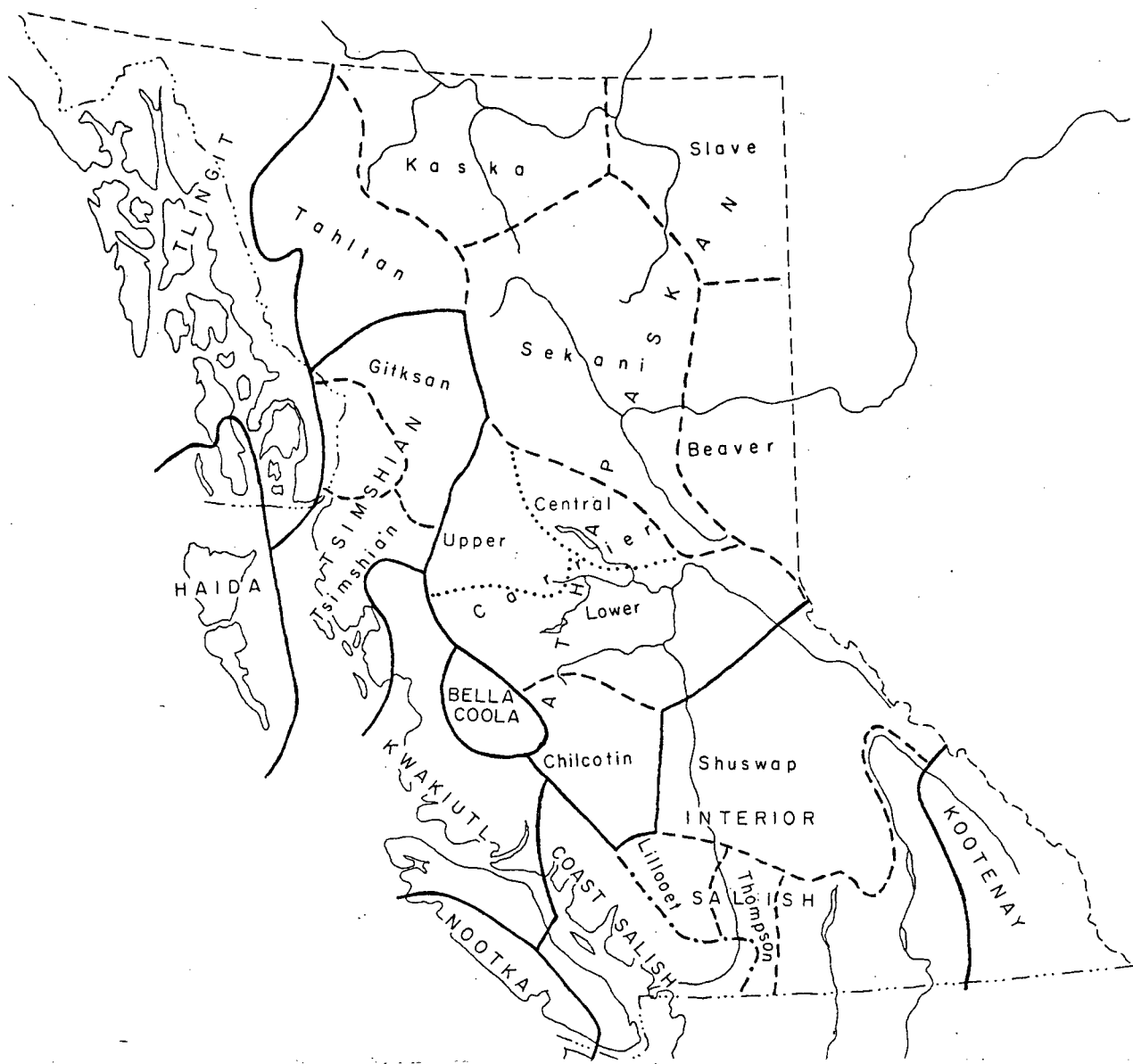


Figure 5. The Indians of British Columbia Showing the Internal Division of the Carrier, According to Hudson (1983) and Tobey (1981). Map Adapted From Duff (1964: 14).

divided on the basis of differences of dialect into three regional groups (Figure 5). The Upper Carrier, or Babines, live in the western part of the Carrier area; the Central Carrier live mostly on or around Stuart Lake; the Lower Carrier are found to the south (Hudson 1983: 47). According to Tobey (1981: 416), the people who occupied Chinlac and the study area would have belonged to the Central Carrier group. In this thesis, the people of Chinlac and the study area are considered to be Central Carrier. The neighbours of the Carrier are the Sekani to the north, the Chilcotin to the south, the Bella Coola to the southwest, and the Gitksan to the west (Hudson 1983: 53). Various branches of the Carrier interacted, in one way or another, with all these groups but ties with peoples to the west were particularly strong and features of Carrier culture were directly borrowed from the Gitksan and Bella Coola (Goldman 1941:396; Bishop 1979;154; Steward 1970:208; Duff 1952: 28).

Morice (1893 :184) states that the Carrier were semi-sedentary and that they inhabited their principal villages in the salmon season. He also states that the winter villages needed to be moved every year (1893: 184). Villages were either on the north shore of lakes "so as to have the benefit of the sun's rays from the opposite side", or at the confluence of rivers (1893: 184). It is interesting to note, Morice notwithstanding, that presently all the major villages near the study area are on lakes, including Nakazleh (Stuart Lake), Stoney Creek (Nulki Lake), and Nautleh and Stellako (Fraser Lake). Morice's statement about the principal village

being at the confluence of the river must be treated with caution.

In earlier times, Carrier villages were organised into groups which were named after the location they occupied on the watershed. The suffix 'tenne' meaning 'people of' is used to denote membership in this larger group. Individual groups were named also. The suffix 'woten' plus the village name identified the individual as an inhabitant of a particular village (Hudson 1983: 49). Before the abandonment of Chinlac, its people would have called themselves 'tano-tenne' (Morice 1893: 25), and 'Chinlacwoten' if Chinlac was indeed the name of their principal village. The people of Chinlac were allied with the people of Leit'li at Fort George , Nautli (Nautleh, Nautley) on Fraser Lake, and with Tachek (Sy-cuz) and Nulki (Nulkreh, Noolky) near Stoney Creek. Incidentally, a person from Stoney Creek still maintains a fish camp at D'no (Tanno) which is just down river from Chinlac, so the ancestral name is still present in the area, and the connection between the study area and Stoney Creek is evident.

Although Steward believed that patrilineal descent groups had been present at one time (1970:208), a position supported by Helmer (1975: 77), the Carrier had exogamous matrilineal descent groups or clans in ethnographic times (Duff 1952; Hudson 1972:20, Goldman 1941:39). The clan apparatus was important to subsistence and settlement because resources were controlled by the clans through families and villages

(Hudson, 1983: 69). Within the clan, actual resource locations, including hunting and fishing sites were owned by the nobles (called 'deneza'). The fur trader Connolly, in his report for the year 1826 (HBCA B.188/a/5 fo.141) states that "the country has been parcelled out amongst certain families to whom it descends by inheritance".

The clans helped to link local groups with others such as the Babines to the west. Hudson (1983: 71) notes that ,

...the clan system provided a means of maintaining exchange relations between local groups which had control of resource areas which in turn were subject to periodic fluctuations.

Hudson refers specifically to the failure of the salmon and emphasises the importance of inter-group connections to subsistence (1983: 79). He argues that Suttles' concept of a "community" linked by factors such as intermarriage is appropriate for the Carrier.

This concept seems applicable to the Carriers; with a pattern of intervillage relations based on the necessity of access to seasonally abundant food supplies, and relations with the coastal villages partially based on the lack of fur-bearing animals and large game in the coastal area (1972:99).

Furthermore, he notes that the boundaries of the "community" would shift with each generation and relative to each village, that westward realignment would have increased as the fur trade developed (Hudson 1983:100,106), and he infers that relations would increase in intensity as one neared the coast. Without these connections, survival within the areas occupied by the Central and Lower Carrier would have been much more difficult. Bishop (1979:151) also makes this point.

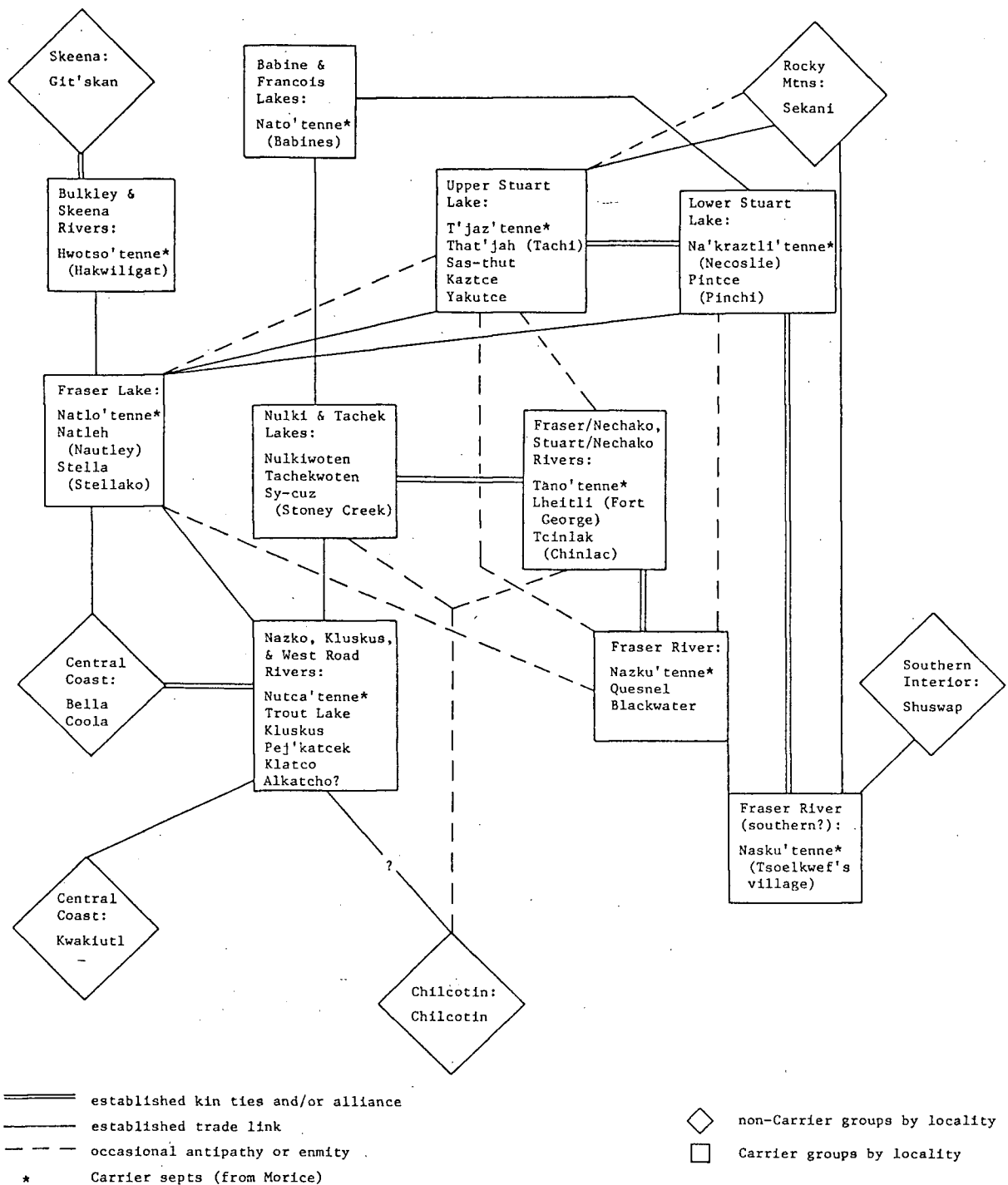


Figure 6. Social and Economic Relations Between Carrier Groups and Other Native Groups c. 1820. Based on Information From Morice 1893: 10-31, Morice 1978 (1904):4-32, HBCA B.188/b/1-3, HBCA B.188/a/1-13, HBCA B.188/e/1-5 HBCA B.74/a/1.

When the fur traders arrived, all Carrier groups seem to have had trade and kin links with west. In Figure 6, I have sketched a rudimentary network which I have pieced together from historical and ethnographic sources. It may be noted that the Tanno-tenne have strong ties immediately to the south and west. There are indications that kin ties existed between the people of the Stoney Creek area and the Babines. It may also be , given the close ties between Chinlac and Stoney Creek, that these ties included the Chinlac people.

House Styles

In a later chapter on the Chinlac site, I present the floor plan described by Borden and a second plan reconstructed from his notes. While it is difficult to identify the dwelling style from these plans, it is worthwhile at this time to describe the habitations documented by Morice (1893), for the purpose of future comparison. It will be noted that the style of the winter house is quite different from that of the summer houses so that if the style present at Chinlac could be identified, the season of occupation might be better defined. Although Morice does provide floor plans, unfortunately, he does not give precise dimensions.

Morice describes two types of dwelling used in the summer and early fall (during the salmon season). The first type is the ceremonial lodge built as both a residence and feast house by the 'deneza' (nobleman) (1893: 185). The main supports of this building are four large posts and connecting beams (Figure 7). Four additional posts , one at each of the outside corners, were placed to hold up the walls and to

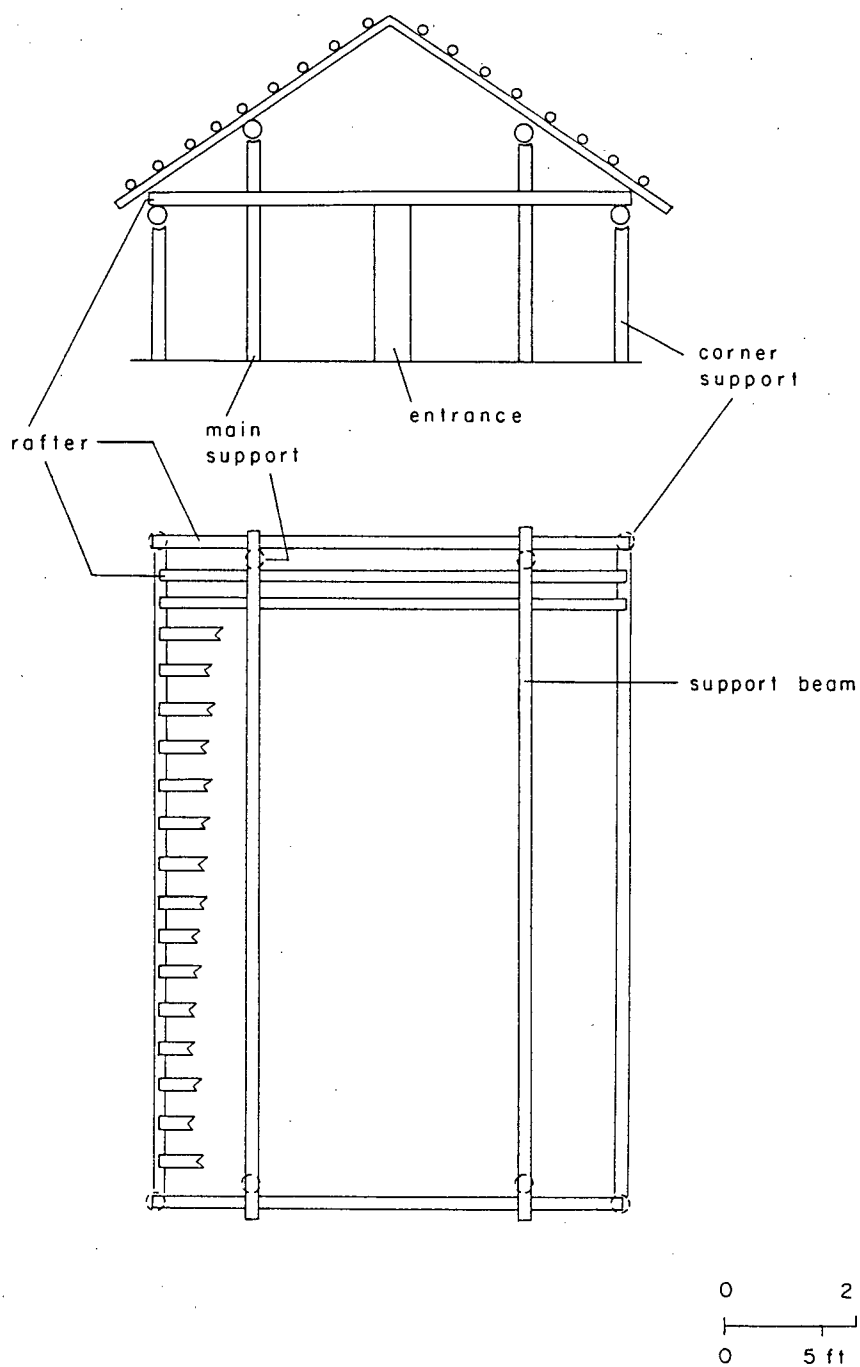
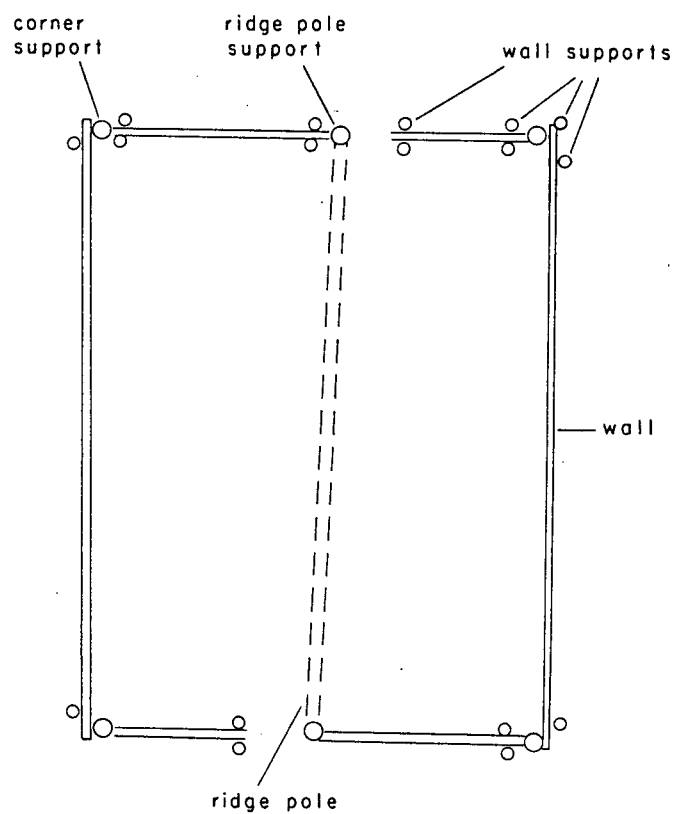


Figure 7. Carrier Summer Ceremonial House From the Early Historic and Protohistoric Periods. From Morice (1893: 184-93).

support the eaves. The roof was made of spruce bark tied with strips of willow bark, with an aperture being left for a smoke hole, and the walls were made of spruce slabs fitted vertically into grooved logs lying on the ground. There were two entrances, one at the front and one at the back. The hearth was situated in the center of the house and the fire was built on bare ground; there were no partitions of any kind within the house itself (Morice 1893: 185-187). The second type of summer house is smaller than the ceremonial house and more haphazard in its construction (Morice 1893:188). The main supports for the roof of this family dwelling were two posts situated at the front and back of the house (Figure 8). The walls were made of spruce bark slabs positioned between pairs of upright poles sunk into the ground. Morice also mentions a third summer dwelling which he calls a "fishing lodge". This structure was similar to the house just described but was very crudely constructed (Morice 1893: 189).

The Carrier winter house was quite different than the dwellings used at the salmon fishing locations. These were carefully constructed so as to keep out the elements and had pitched "A-frame" roofs (Figure 9). The roof was supported by a framework of beams resting on four posts sunk into into the earth. The poles which formed the basis for the roof were split and the ends of these were also driven into the ground. The door was an opening beneath a slab of spruce which was covered by hides and blocked by a semi-circular "dooryard" which protected it from the wind. This was made of poles laid



scale not known

Figure 8. Carrier Summer House From the Early Historic and Protohistoric Periods. From Morice 1893: 184-93.

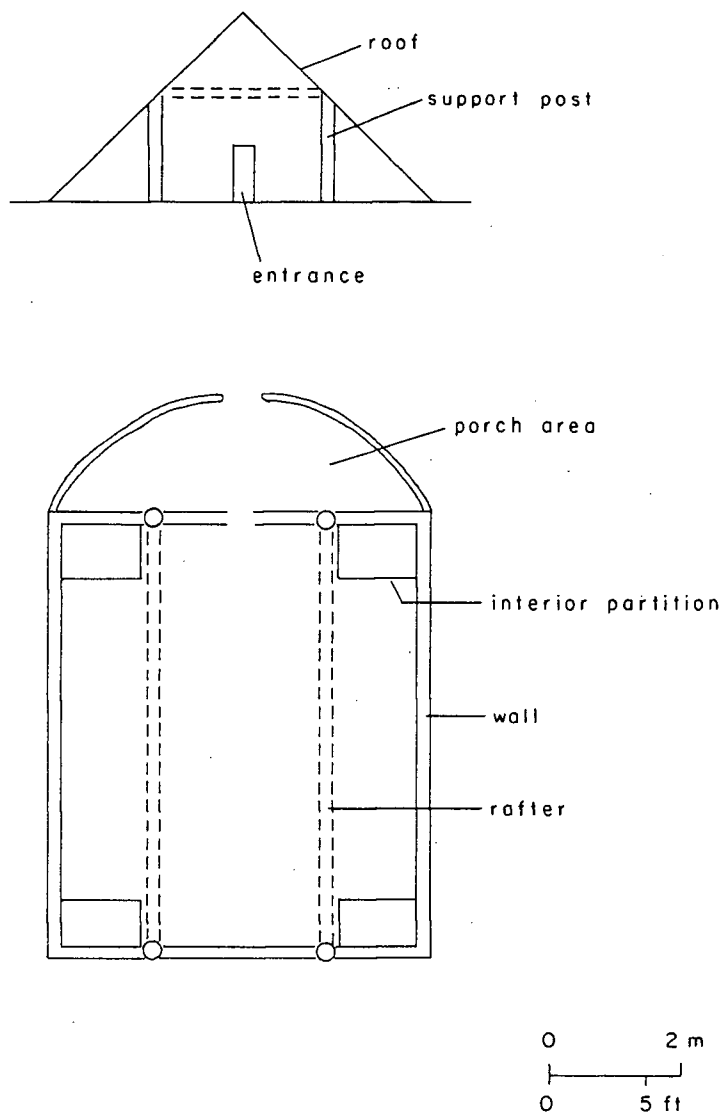


Figure 9. Carrier Winter House From the Early Historic and Protohistoric Periods. From Morice 1893: 184-93.

against the peak of the roof and sloped to the ground. Partitions made of planks were present within the house (Morice, 1893: 190).

Resource Exploitation

The Carrier used a variety of methods to exploit the food resources available to them. The principal resources were fish, as I have mentioned, but birds and land animals were also taken and plants were eaten or used. In this section, I present a brief description of Carrier resource exploitation and the technology used. The Carrier used plant materials for many purposes. I have mentioned the use of spruce as a construction material for houses but it was also used for other purposes. Black spruce bark was used to make canoes, berry boilers, and baskets; split spruce root, called 'wat-tup' was used to sew baskets together (Morice, 1893: 120-122,126). A variety of baskets, boxes, and other containers were manufactured from birchbark but there is no mention that this material was used in the construction of houses or canoes. Many of the bark containers were used in fishing-related activities, particularly during the salmon season, and in berry picking and processing (Morice 1893: 120-125). Morice (1893:115-130) lists other plants used by the Carrier. A species of fern (Pteridium aquilinum pubescens ?) which was called 'ah' was prized for its root which was eaten fresh or baked in a pit surrounded by smoldering alder chips. The bulbs of tiger lilies (Lilium columbianum) were dug as soon as the snow was off the ground. The Carrier also ate the bulb of the wild onion (Allium cernuum) and the dogtooth violet

(Erythronium grandiflorum) and parts of the cow parsnip (Sium suave), oregon grape (Berberis aquifolium), and fireweed (Epilobium angustifolium). The black tree lichen (Alectoria jubata) was picked, washed, and baked into cakes. The cambium layer of the lodgepole pine (Pinus contorta) was scraped from the tree in late spring and eaten fresh, or else dried for later use (Turner 1978: 58-59).

The saskatoonberry (Amelanchier sp.) was an important shrub and its branches were used for wattle, and for arrows and "rod" armour (Morice 1893:55,117). The berries (called 'mai') were eaten fresh with a seasoning of bear or salmon oil, or else boiled down into cakes which could be stored (Morice 1893: 125). Huckleberries (Vaccinium sp.), cranberries (Viburnum trilobum), soapberry (Shepherdia canadensis), and kinnikinnik (Arctostaphylos Uva-ursi) were similarly treated. Apparently, other berries were of little economic importance (Morice 1893: 128-129).

Land animals were hunted by the Carrier, although trapping and snaring seem to have been preferred. Morice (1893: 94-104) describes the various traps and snares employed to take the different game animals. Beaver (Castor canadensis) and muskrat (Ondatra zibethica), for example, were caught in basket traps similar to those used to catch salmon (described below). Beaver were also taken with harpoons which had barbed heads made of bone (Morice 1893:67-8). Although all species of land animals present in the area (listed above) were hunted, there were some important restrictions. The

beaver was the exclusive property of the 'deneza' and could only be hunted by him or his designates. William Connolly (HBCA B.188/a/5 fo. 141) wrote in 1826, that the ownership of sections of the country were inherited and that "a number who have no lands...are not permitted to hunt (beaver)". Bears were sought during the salmon season when they were came to the rivers to feed on the fish; they were usually killed in deadfalls built on the river banks (Morice 1893: 94-96).

Birds were hunted, netted, and snared whenever possible. Ducks and grebes were sometimes snared with small nooses attached to sticks stuck in the bottom in shallows of the lakes and ponds but more usually they seem to have been caught with nets. Morice writes that grebes (Podiceps sp.) were taken in large numbers in the spring (1893:107). Geese (Branta canadensis) and swans (Olor buccinator) were also hunted (1893: 104-105); swans were caught during their flightless period in the summer (HBCA B.74/a/1 fo.32).

Fish were harvested in various ways although, here again, trapping was extremely important. Fishing locations were important and camps and villages were usually situated at places where weirs and traps could be used (Morice 1893: 184; Hudson 1983:57,58,63). Often a technique used to take one species of fish could be used to harvest another. Hudson states that there are a limited number of fishing places where weirs could be used (1983: 79)

The salmon were caught in the rivers. Spring salmon were sometimes speared with a composite harpoon which had barbs

made of bone. Dipnets and leisters were used for both the sockeye and the spring salmon, but more usually the former were caught in traps. Figure 10 shows a weir and basket trap set-up 'kamstkadals' used in river shallows and built of poles lashed together with willow or spruce saplings and supported by heavy posts driven into the river bed every 40 or 50 feet. The long tapering baskets ('nazrwet'), made of split Douglas fir, were set in the weir at regular intervals with their narrow ends pointing downstream. Often, rectangular baskets were attached to the 'nazrwet'. The salmon swam up to the weir during the night and then into the openings at the weir end of the 'nazrwet'. From there they were forced back into the narrow end of the basket and were removed by the fishermen (1893:86).

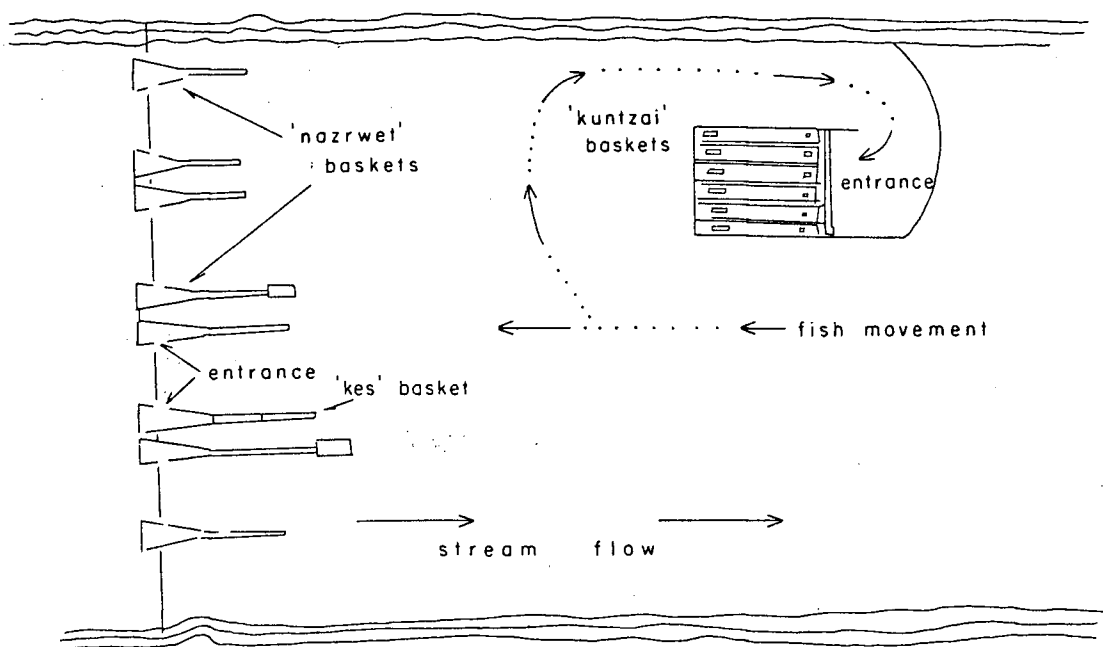


Figure 10. Carrier Fish Weir . From Morice 1893: 88.

A second type of salmon trap also shown in Figure 10 features cylindrical baskets called 'kuntzai'. These were about 15 feet long and were 4 feet in diameter. The fish were driven into the "corral" by people in canoes who splashed their paddles on the water, and then were forced into the basket traps. The ends of these were lifted onto the log "sill" at the front of the trap and the escape of the fish prevented. This type of trap was sometimes used in connection with the weir and variations of 'kuntzai' baskets were used to catch other species of fish, and for beaver (Morice 1893:87).

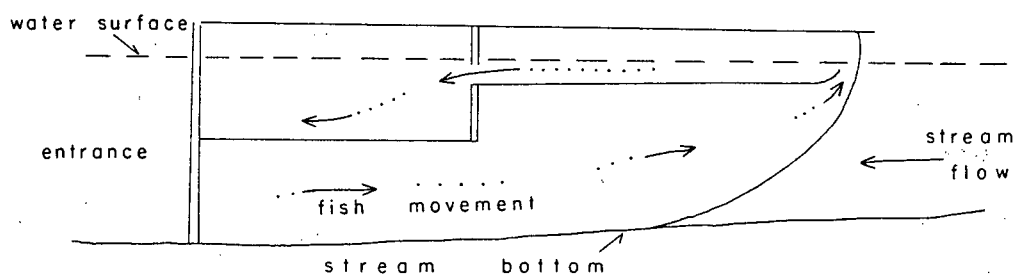


Figure 11. Carrier 'es' Fish Trap. From Morice 1893: 89.

Trout (Salmo gairdneri) and burbot (Lota lota) were caught in a basket trap (called 'es') which could be used in shallow and sluggish streams and which is illustrated in Figure 11 . A similar trap ('we') was also utilized in sluggish streams and required that a weir be built across the width of the stream (Morice 1893:89).

Hudson (1983:64) states that suckers were generally caught in weirs and traps built on smaller streams. The small fish ('thelmek') were caught in dipnets when they schooled on the surface of lakes in the spring (Hudson 1983:59). Fish were also caught by trolling and with set hooks. Morice (1893: 89) reports that the kokanee were caught in the smaller traps used for sockeye. Whitefish were caught in traps and nets and, according to Morice (1893: 74), were sometimes frozen by the thousands.

Salmon were preserved in the following manner. The fish was split longitudinally and the backbone was stripped out and either discarded or fed to the dogs. The flesh was scored and the fish was pinned open with pieces of wood, after which it was air dried and then smoked on racks. Salmon heads were often allowed to putrify and then boiled in order to release their oil. Salmon roe was wrapped in bark and placed in holes in the ground until it putrified (Morice 1893:92-93). Char were preserved the same way as sockeye. Trout and suckers were dried on racks (HBCA B.74/a/1 fo.23). Food was stored in raised caches but cache pits were also dug into the ground for temporary storage, particularly during the salmon season (Morice 1893: 196-197).

The Seasonal Round

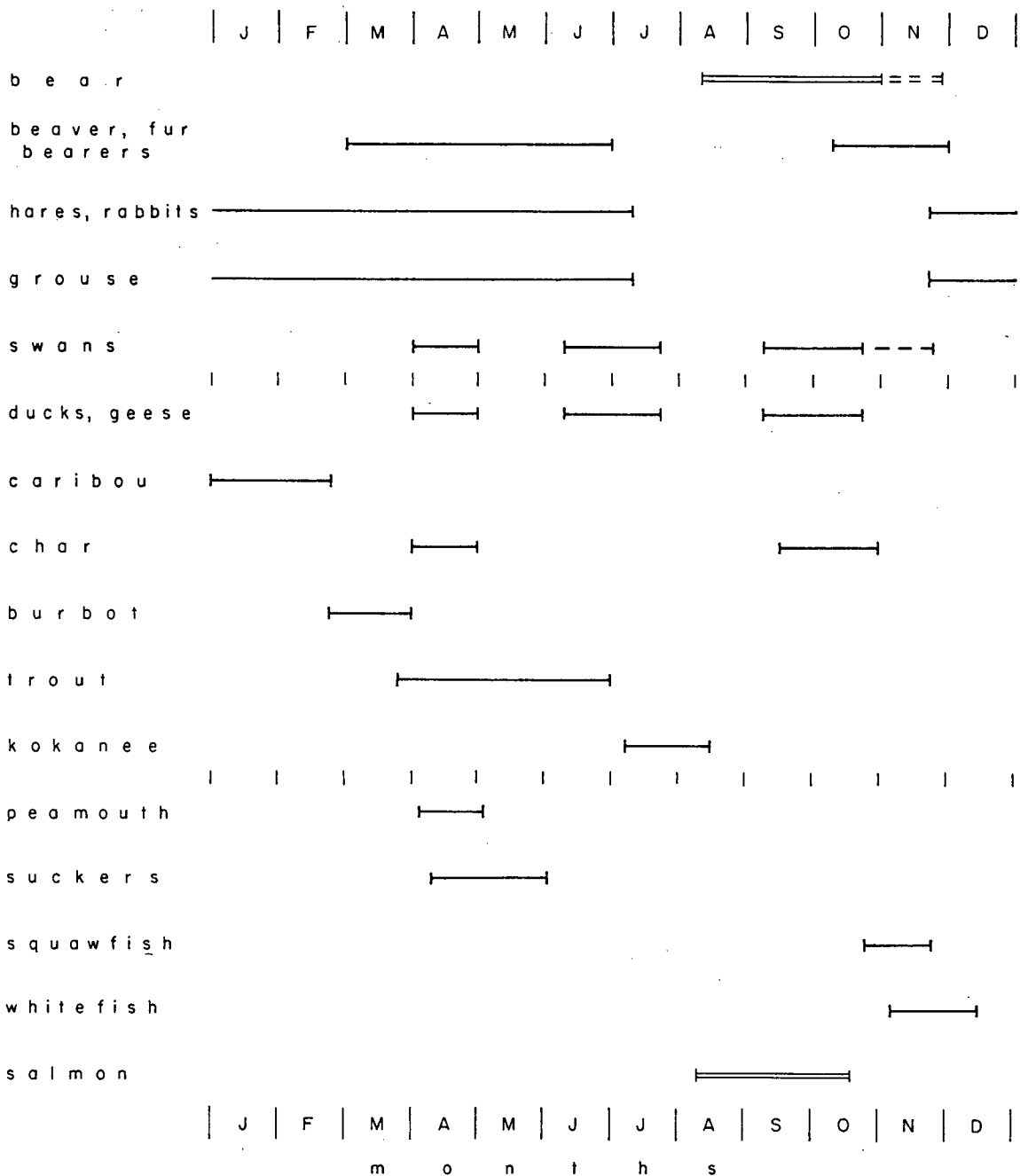
As indicated, resources within the study area are available at certain times of the year and the most important resource, fish, is particularly seasonal. The Carrier calendar, as presented by Morice (1893:106), reflects this.

satco, big moon
tsez-sel, ?
tsez-tco, ?
cin-uza, month of the spring
tekes-uza, month of the carp
tanx-uza, month of the summer
kezel-uza, month of the land-locked salmon
thallo-za, month of the red salmon
pit-uza, month of the bull trout
loh-uza, month of the whitefish
panren-net'sekei, 'during its half one navigates'
satco-dinai, 'next to the big moon'

By combining information from historical and ethnographic sources, it is possible to describe the seasonal activities of the Carrier (shown in Figure 12). Historical documents used in this reconstruction include : Post Journals from Fort St. James (HBCA B.188/a) and Fort Fraser (HBCA B.74/a), Post Correspondence from Fort St. James (HBCA B.188/a), and District Reports for New Caledonia (HBCA B.188/e). These support the traditional calendar described in the ethnographies.

January-February

The Carrier were not very active in mid-winter. Very little hunting, even for fur-bearers, took place at this time (HBCA B.188 /b/1 fo.20d). Stuart wrote in 1823 (Ibid fo.34) that "those who know the Carriers, know that they hunt but



lakeside riverside

Figure 12. Principal Hunting and Fishing Times for the Carrier in the Early Historic Period, by Species and General Area. From Morice 1893, 1978 (1904), Hudson 1983, HBCA B.188/b/1-3, HBCA B.188/a/1-13, HBCA B.188/e/1-5, HBCAB.74/a/1.

little in winter". January and February seem to have been months when people went outside as little as possible. Gambling and socialising were important activities at this time (HBCA B.188/6/1 fo.11d). In poor salmon years, the area seems to have been deserted entirely by the Carrier who went off to winter with their kin in the west (HBCA B.188/b/2 fo.14,17d) where salmon was available.

March

The beginning of March was an important time in the calendar because the hunt for beaver and other fur bearers began at this time. Connolly (HBCA B.188/a/5 fo.14d, 1826) reported that the season for beaver hunting ran from March to the beginning of June and from the beginning of October to the end of November. Trout were congregating to spawn at this time and the Indians speared these through the ice (HBCA B.188/b/2 fo.27d). Coarse fish, called "carp" in the post records, were also taken at this time; these were probably suckers. Some fish such as burbot were caught by dangling bone hooks and baited bone pins through holes cut in the ice (Morice, 1893: 72-73). The Carrier were probably all living on the lake shores in March; some were reported on Nulki lake at this time in 1823 (HBCA B.74/a/1 fo.18) and others were on Stuart and Fraser Lakes. Some hunting of hares and grouse is indicated at this time (HBCA B.188/a/1).

April-July

This period was of critical importance to Carrier subsistence as it is the spawning period for several species of fish which were important ethnographically to the food supply. In April , hunting and fishing began in earnest. From April to June, geese, cranes, eagles, grouse, ducks, and grebes were bought at Fort St. James from the Indians (HBCA B.188/a/1 fo.2d-4d). Morice's information (1893:159) about the Carrier fishing for 'thelmek' with dipnets is confirmed by John Stuart (HBCA B.188/e/1) who reported that the Indians caught "carp" and considerable numbers of a small fish "not above an ounce in weight" in the spring. The "carp" were probably suckers which, as mentioned , spawn in the spring and early summer. The trader McDonnell at Fort Fraser bought large numbers of fresh and dried "carp" in May and June from Sy-cuz (Stoney Creek) (HBCA B.74/a/1 fo.23,28). Sy-cuz was on Nulki Lake at its outflow, Stoney Creek , where the suckers spawn.

July was spent fishing and hunting; the gathering of plant foods , which would have begun in the spring, continued although most berries would not be ripe in July. Kokanee and trout could be taken with a troll at this time and swans were killed. Some whitefish were apparently also caught in July and so was the occasional sturgeon (Ancipenser transmontanus). Simon Fraser, however, reported that the Indians had no means of taking sturgeon prior to the arrival of the Europeans with their stronger nets (Lamb 1960:321). The Carrier would probably remain at the lakes into July, living

on stores of dried suckers, trout, and small fish (HBCA B.188/a/5 fo.145).

August-October

The latter part of the summer and the early fall constitutes the salmon season when a move to the rivers was necessary. Weir construction began in late July (HBCA B.188/a/1 fo.13-14.) and spring salmon would be speared while the Carrier awaited the arrival of the sockeye . As mentioned, some locations are better suited to the construction of a salmon weir than others . Chinlac seems to be in a good spot because the river is shallow between the river bank and an island in the center of the Stuart. I checked the depth of the river in front of Chinlac in July and August and estimate the maximum water depth at a meter or so. During the salmon season, bears were taken and berries were picked and processed. Some beaver hunting may also have occurred in some areas (HBCA B.74/a/1 fo.42). The Carrier stayed at their salmon fishing locations until the run had finished.

November-December

October marked the beginning of the fall fur trapping period which continued until the end of October. This is also the season when the whitefish spawn and the Carrier could catch the greatest numbers. Whitefish spawn in lake shallows and it would have been necessary at this time to move from the salmon procurement locations on the rivers back to the

lakes in order to harvest these fish and other lake resources such as char. It is likely that the winter camps of the Carrier were on the lakes. (HBCA B.74/a/1 fo.32; cf. Morice 1983:184).

The Importance of Fish Other Than Salmon to Carrier Subsistence

Although salmon was extremely important to Carrier subsistence other fish were necessary to survival. I have described the fish resources available and the means used by the Carrier to secure these. Comments in the historical records, and in the ethnographies indicate that the secondary role assigned to other fish may be misleading, and together, these may have been as important as salmon in some years. Tables 2 and 3 represent an attempt to count the various fish species in order to determine the proportion of total catch represented by fish other than salmon. This is obviously far from satisfactory because accurate figures over an extended period were not available. Also, I believe, the fact that salmon were so easily stored, and became a standard which could be converted to Made Beaver (the unit of exchange for the HBC), meant that they were preferred by the fur traders above other species. Nevertheless, the tables do show a heavy use of the secondary fish; together these equal close to 50 % of all fish bought by Fort St. James in 1823. This may be indicative of the proportion of native diet in fish constituted by the various species, at least in low salmon years. Hudson (1983:168) states that whitefish and char were second in importance to salmon in the diet of the people of Stuart Lake.

 Table 2 - Fish purchased for Fort St. James, 1811,1820,1823

Year	Salmon	Whitefish	Trout	Carp	Sturgeon	Kokanee
1811	25000	7000	N.A.	N.A.	N.A.	N.A.
1820	yes	3000+	yes	yes	yes	yes
1823	9600	2800	2000	3000	7	N.A.

From: HBCA B.188/b/1-3; B.188/a/1-2

 Table 3 - Fish purchased for Fort Fraser, 1823

Year	Salmon	Whitefish	Trout	Carp	Sturgeon
1823	40000	Yes*	150**	6000+	Yes

From: HBCA B.74/a/1

* Loads of whitefish were bought but no numbers were given.
 ** More trout were bought-numbers are for one purchase. Carp are probably suckers.

Native Resource Use and Settlement in Recent Times

Locations in the study area were used for resource exploitation by members of families from Stoney Creek who seem to have inherited the use of the sites. On Figure 13, I have shown the areas where these activities take place. One individual maintains a salmon fishing camp at D'no (Wedgewood) on the Nechako, a few kilometers downriver from Chinlac. Another family used to fish at Finmoore which is several kilometers upriver from the confluence of the Stuart and the Nechako. Two of my informants had fished for whitefish with nets in the large bay on the north shore of Cluculz Lake. In the spring, they fished for trout and suckers in the same area. Both individuals fished for char in the lake during the fall.

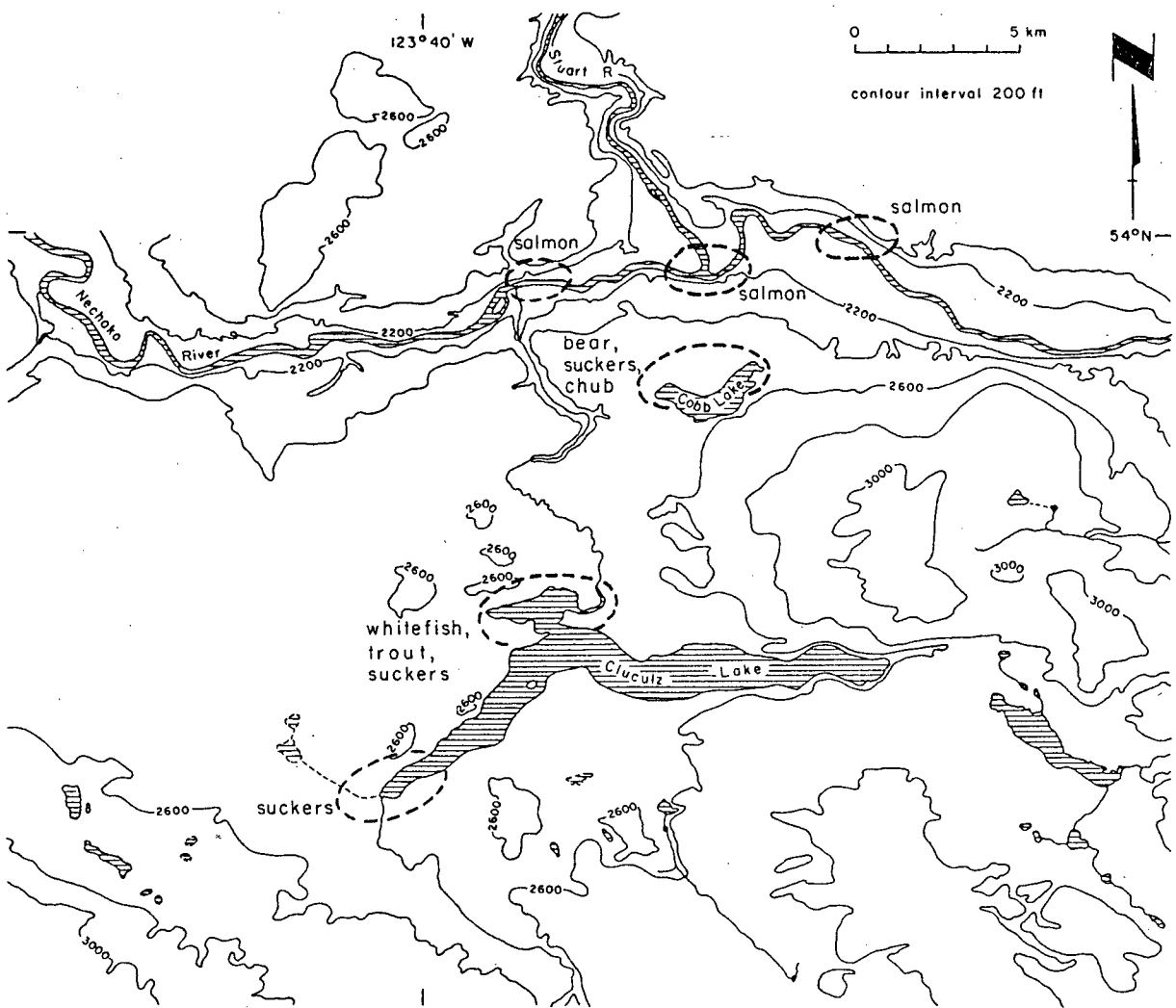


Figure 13. Locations Within the Study Area Utilised by the Carrier for Resource Exploitation in Recent Times, By Species.

The elders remember that a member of a Stoney Creek family maintained a fishing camp on Cluculz Creek. Another man stayed on the small island across the lake from the outflow while he worked his trapline. Two informants indicated that some fishing took place at the west end of Cluculz Lake but they stated that the best fishing was in the bay already mentioned.

One informant has camped on Cobb Lake and she fished for suckers there, and for a time while her husband worked on the railway at Finmoore, she brought her laundry to the lake for washing. Another person stated that the Cobb Lake area was used for bear hunting.

Aboriginal Trade in British Columbia

The inhabitants of the study area carried on trade and had intercourse with other natives during ethnographic times. They had close ties to the peoples of Sy-cuz and Leit'li , and they probably carried on trade and were in communication with more distant groups, thereby bringing outside goods into the area. Description of these relations can help isolate influences which may have affected local society, and may help determine the origin of some of the material culture found during archaeological investigation.

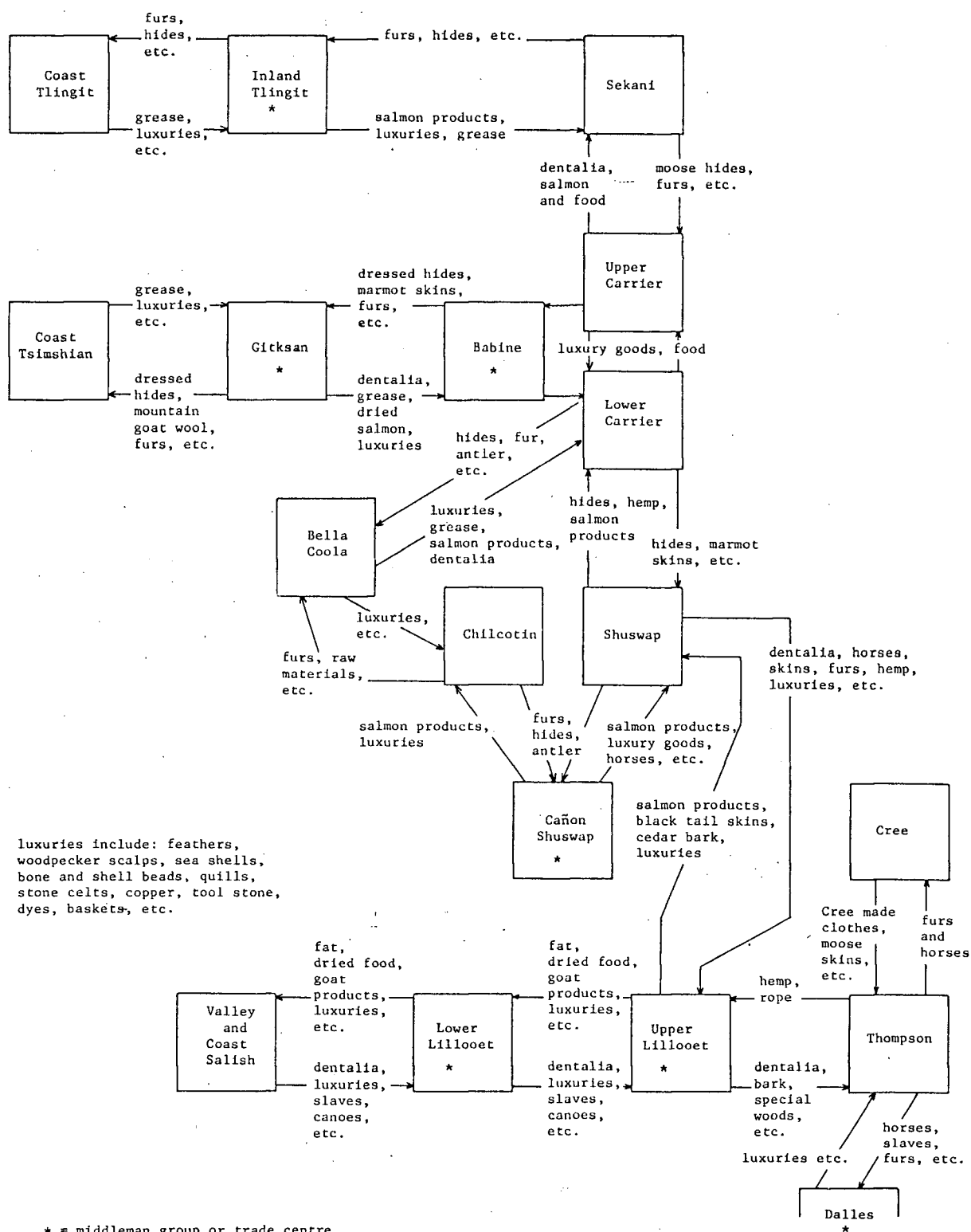


Figure 14. Aboriginal Trade in British Columbia During the Protohistoric and Early Historic Periods. From Teit 1900, 1906, 1909, 1930; Jenness 1943; Morice 1978 (1904), 1893; Hudson 1972, 1983; Helm 1981.

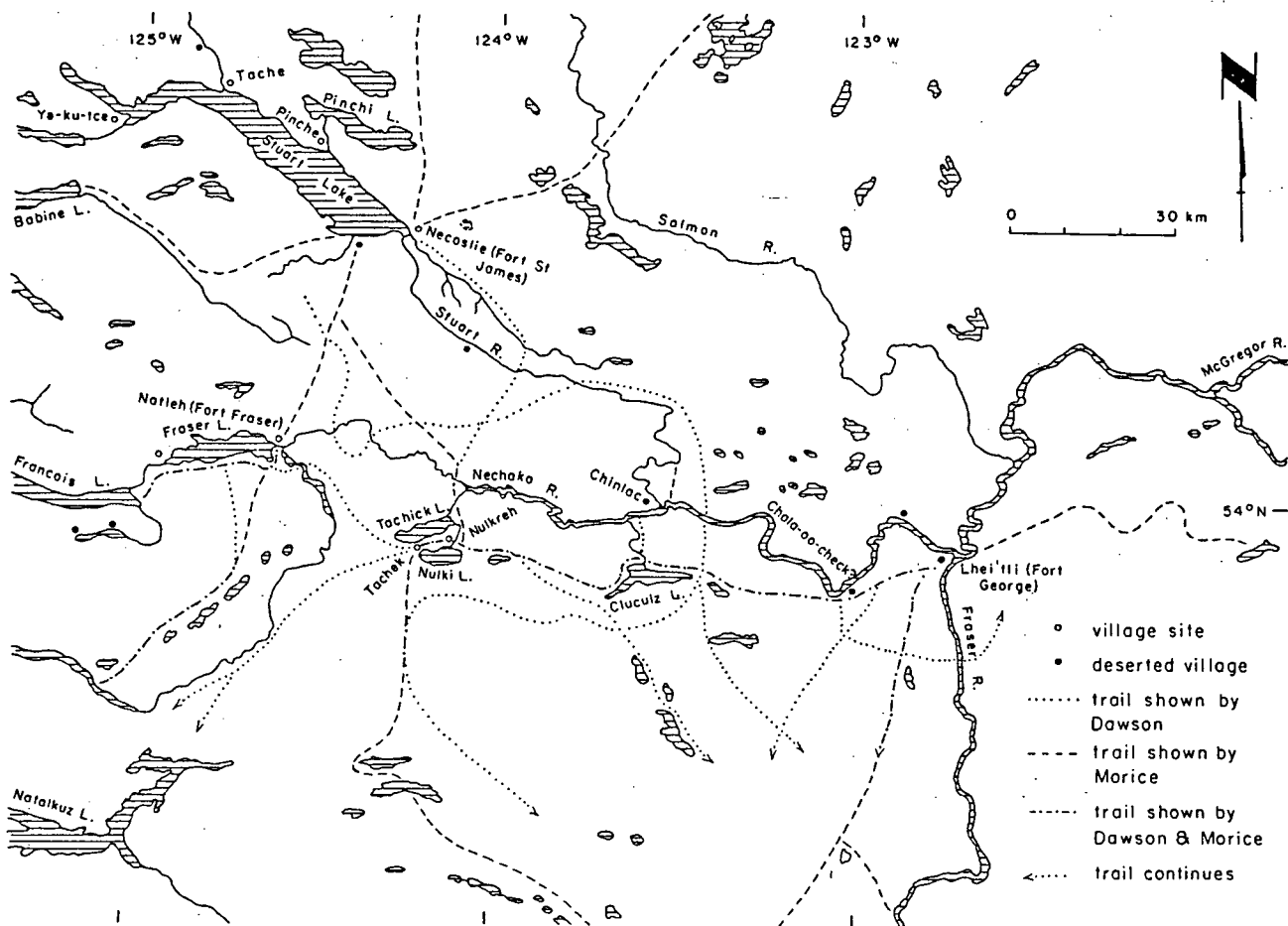


Figure 15. Aboriginal Trails Within the Study Area. From Morice 1978 (1904); Dawson 1878.

Some features of early trade patterns are discernible in historical and ethnographic literature. Fur seems to have been the most important item traded out of the area, and dentalium, nephrite, obsidian, basalt, and other materials were brought in from outside (Hudson 1983: 84). In later times, as I will describe below, these trade relations worked against the fur traders. McLellan (1981:387-388) summarises relations between the coast and interior. Figure 14 shows a pattern of trade networks which I have reconstructed from various sources. Figure 15 shows the local part of a network of aboriginal trails which facilitated communications in earlier times.

Summary

The staple of the Carrier diet was fish. Although salmon was the major resource available to the Carrier, other resources were necessary for survival. Fish such as whitefish, trout, char, suckers, and small fish which were available in the lakes and creeks were very important. The seasonality of resources and the different areas where they were available seemed to have influenced settlement. The Carrier moved to the lakes in the fall to catch whitefish and char and they were at the lakes in the spring to harvest trout, suckers, and small fish. Salmon camps which were situated at good fishing locations were occupied from July to October. Other resources could probably be harvested from either the fall/winter/spring camp or from the salmon camp.

In more recent times, Carriers from Stoney Creek, to whom the Chinlac people were related, continued to exploit the resources of the Nechako River, Cobb Lake, and Cluculz Lake in their season. In earlier times, the Carrier had a variety of means for harvesting resources and some were more appropriate for one location and species than they were for another.

The ownership of resources by the 'deneza' was a feature of historic Carrier society. Beaver, in particular, were an owned resource and could only be hunted by particular individuals who had inherited the right in the matriline, and fishing at weirs was also controlled by these people (Hudson 1983: 57). As a result of interaction with coastal peoples, social stratification may have occurred and coast forms such as house styles may have been adopted. The large ceremonial house, described above, seems appropriate for potlatching and other rituals derived from elsewhere (Hudson 1972:45) . The connection local Carriers had with groups to the west also ensured survival when the salmon run failed. At such times, many Carriers seem to have left the area.

CHAPTER 4

THE HISTORIC PERIOD

Introduction

In this chapter, I describe the results of the European land-based fur trade on Carrier settlement and subsistence patterns. As a new economic structure was imposed upon the region, significant changes occurred in Central Carrier society. Specifically, the power of the 'deneza', who had controlled access to resources, was undermined as trapping became more and more important (Hudson 1983:86). The fur trade had a direct effect on subsistence because it made demands on the natives who were called upon to supply the posts, and it created scheduling problems by encouraging trapping at all seasons. Settlement was affected because the trade encouraged smaller family groups as opposed to clan-based socio-economic units into which the Central Carrier had been organised (Hudson 1983: 103). The placement of the fur trade posts would also distort native settlement patterns because they would tend to draw people to them. Also, European diseases which accompanied the fur trade caused a dramatic decline in the Carrier population generally (Hudson 1983: 99) which must have caused changes in settlement.

Although a village at Chinlac is mentioned in the early historic period, it is uncertain whether it was at the same place as the archaeological site GaRv 1. Confusion

arises because to the fur traders, "Chinlac" was the name given, in a general way, to the confluence of the Stuart and Nechako Rivers. In any case, no permanent village seems to have existed in the area in later historic times. It appears that permanent occupation of the study area ceased early in the historic period, and that gradually a pattern emerged in which some locations continued to be used by people who had a claim to the resources through descent but who had their homes elsewhere. During the early part of the historic period, contacts between peoples to the west and the local Carrier continued to be important.

Factors Affecting Settlement During the Historic Period

Europeans did not appear in New Caledonia until 1793 when Alexander MacKenzie passed down the Fraser to the Blackwater River and thence to the coast (Lamb 1970). In 1805, James McDougall, in the employ of the Northwest Company, reconnoitered the area to the east of Stuart Lake, and in 1806 he visited the site of Fort St. James (see Figure 2, page 11) near Necoslie where he distributed a few presents to the natives he found there (Morice 1978: 55). In the early summer of 1806, Simon Fraser ascended the Nechako and Stuart Rivers and began trading with the Carrier at the village of Nakazleh (Necoslie) at the southern end of Stuart Lake (Morice 1978: 60-63). Fort St. James was built near the outflow of the lake, and later in 1806, Fort Fraser was established at the eastern end of Fraser Lake near the village of Nautleh (Figure 2, page 11). Fort George was built at the

confluence of the Nechako and Fraser Rivers in 1807, but was less important than the other two posts. It was abandoned in 1808 and only re-established in 1820 when employees of the Hudson's Bay Company began trading there (HBCA B.188/e/1 fo.3d). The year 1806 marks the real beginning of the historic period in the study area. However, before that time, the Carrier were trading with coastal people who had access to European goods (Hudson 1983: 84).

The orientation of the Carrier to the west is well known (Steward 1970:208; Tobey 1981:418; Bishop 1979:150; Morice 1893; Duff 1952:28; Goldman 1941:396). There is, as I have pointed out, considerable evidence that connections with western groups enabled the Carrier to occupy the eastern parts of New Caledonia, and to maintain a non-egalitarian society. Both the Northwest Company and the Hudson's Bay Company were concerned by the coastward trade because this prevented them from maintaining a monopoly. Of the trading posts established in New Caledonia, at least three - Fort George, Fort Kilmaurs (Fort Babine), and later Stoney Creek Post (near the village of Nulkreh) were set up to maintain fur company monopolies (Figure 2, Fort Kilmaurs not shown). In the case of Fort Kilmaurs, which was at the north end of Babine Lake, it was hoped that native trade with the coast, involving middlemen, would be intercepted. Specifically referring to this situation, John Stuart wrote in 1823 (HBCA B.188/b/1 fo.11),

...they leave in the beginning of November to go overland to a large river which falls into the Pacific Ocean ... here they find those Indians who trade with the Europeans of the seacoast, with whom they trade their peltrie for salmon, and such articles of European manufacture as they are most in want of...

And later he writes (Ibid fo.12),

...experience has convinced me that not only the natives of every village where we have Establishments, but also those of other villages frequenting them, are adverse to us going on trading excursions and will frequently circulate false reports to prevent us and secure the trade for themselves.

The Central Carrier must have intensified their connections with the western groups during the early historic period. Given the dependence upon the salmon in the Skeena drainage, and their kin ties with the Babines and others, this must have been relatively easy to do. The land-based trading companies worked very hard to destroy these trade connections which must have tended to reinforce the control of the 'deneza' who sent furs west and received trade goods from the Babines and others. In later times, it appears as if the traders had some success and some of the Carrier became more dependent upon the trading posts within their areas (Bishop 1979:155).

During the early historic period, settlement patterns within the study area continued to reflect the highly seasonal and localised nature of important resource items. Three factors influenced the breakdown of the traditional patterns. The first of these was disease which resulted in a decline in population (Hudson 1983:99). Census figures of a kind were

kept by the fur traders for reasons of commerce, after 1820. In 1820, Stuart wrote (HBCA B.188/a/1 fo.18d) that at Fraser Lake "... there are few Indians to work the salmon, for so many died there lately", and that the rest of the Indians had deserted the village to avoid the sickness. In the winter of 1823, McDonnell (HBCA B.74/a/1 fo.54) wrote that most Indians were sick in Nautleh (probably of dysentery) and that "7 or 8 had died since fall". The effects of disease and population decline are difficult to gauge. Some Indians seem to have come to the posts to try to get treatment from the Europeans but more often the band seems to have dispersed. As a result of population decline, some realignment took place; territoriality must have been severely affected. Also, it is likely that smaller socio-economic units would result (Ray 1974:108).

The positioning of the posts influenced settlement patterns because the traders offered goods which the Indians wanted, and because the posts drew on native subsistence. In the case of the latter, supplying the posts with salmon became an important economic activity among the natives (Hudson 1983: 95). Hudson (1983) states that the Carrier of Stuart Lake were able to control prices paid for fish for a time but that it is difficult to know whether the fish which were supplied to the posts were surplus to the needs of the Carrier. It is also difficult to know how important fish trading was to the Carrier economy but it was certainly significant. Bishop (1979: 155) reports that in 1825, the

district of New Caledonia required 36,450 salmon to maintain itself. Indeed, the administrative center of the district, Fort St. James could not provision itself but had to depend upon the greater resources of Fort Fraser (HBCA B.188/b/2). Among the Indians, starvation was common throughout the historic period (Hudson 1983:99).

No doubt the demands of the traders cut into the food supplies of the Carrier and, probably, scheduling problems were also created. The activity of fur hunting, which may have occupied only a few people before the trade began in earnest, may have come into conflict with fall and spring fishing which would have been essential for survival if one lived on the Stuart. I might also add that it is possible that the fur traders may have tried to prevent the construction of a weir on the lower Stuart although there is no evidence to support this suggestion. Obviously, it would have been more convenient for Fort St. James if all the Stuart Lake salmon were intercepted near the Fort where more control could be exercised, than at a relatively inconvenient location downstream.

A third factor which influenced settlement was the economic 'plan' developed for the Department of New Caledonia by the companies. I use the word 'plan' cautiously here because while the goals of the companies remained constant-- they wanted to get the greatest number of furs for the least expenditure -- the means used to achieve these varied with time and circumstances. The companies consistently tried to

restrict the movement of the Indians, however, and attempted to tie individual hunters to the various posts through the use of credit and in other ways (Hudson 1983: 92). This was partly to prevent the Indians from trading outside the monopoly but also to prevent competition between the posts within the district (HBCA B.188/b/1 fo.29). That the traders consciously, or unconsciously, tried to subvert traditional hierarchies to further their own ends is well known (Hudson 1983:84) and constitutes another factor which would have caused repercussions through the traditional systems.

Historical Accounts of Chinlac

Morice (1978:15) stated that Chinlac was abandoned in 1745 after most of the inhabitants were killed by a Chilcotin war party. However, as I shall discuss below, Borden uncovered no conclusive evidence that this attack had resulted in the abandonment of the site, and, in fact, he found evidence that the site had been occupied until the end of the 18th century (1952:34). Although, as I have stated, there is no definite historical evidence for a permanent village at Chinlac, there are indications in the post records that the Carrier utilised the area after the beginning of the Historic period. The first reference to Indians at the confluence of the Stuart and Nechako was made by Simon Fraser in 1806 (Lamb 1966:231).

But it not being the salmon time, we saw none of the Natives until the Forks (of the Nechako and Stuart Rivers), better than half way up, where we saw about 30 men, who had Beaver Cat and Badger Robes for coverings - and a couple had blankets of Cloth.

Examination of the historical documents throws more light on the occupation of the Chinlac area and there are a few references to the place. In 1822, Stuart (HBCA B.188/b/2 fo.18) wrote that no Indians were at the Forks (of Chinlac) in early November. In his correspondence (HBCA B.188/e/1 fo.5), he states that the village of "Chinlak" was dependent upon Fort George, along with the villages of "Cleet-leh, Little Lake, and Chala-oo-check" (Cleet-leh, I think, is Leit'li (Figure 2, page 10)); Chala-oo-check was a village on the Nechako near Fort George; I don't know where Little Lake was). The combined population of all the villages was 113 individuals (39 men, 39 women, 35 children) which had increased by 7 women and a child to 121 people in 1824. (I suspect this may indicate an outbreak of disease elsewhere after which the women left their own villages; men seem to have died at a faster rate in other areas, see Ray 1981:108)). In his census of 1826-27, however, Stuart (HBCA B.188/e/4) does not mention Chinlac or Little Lake; one can only guess what had happened to villagers.

In the Fraser Lake Journal there are several references to Chinlac including some which indicate close relations with the peoples of Sy-cuz. McDonnell wrote (HBCA B.74/a/1 fo.25),

I did not reach Sy-cuz till the afternoon of the 7th...there I find...the chief of Fort George; and a number of his relations and followers and all the Indians of Chinlac, Noolah, Sy-cuz and Natleh are assembled, of the latter, very few of the women were there, the men having been invited by Yass-cho, to a corvee as he is building a house.

Mcdonnell (HBCA B.74/a/1) also noted that an Indian wanted for a killing at Fort George went to stay at Chinlac with his father (in October), and he records that the Indians of Chinlac brought their pelts to Fort Fraser.

References to Chinlac become fewer as time passes and it eventually became not much more than a convenient stopping point for traders on their way down river, and a place to cache goods and furs. In November of 1825, Connolly (HBCA B.188/a 5 fo. 42). wrote,

... obliged to put ashore at the point of Chinlac to repair our damages ... we saw some recent marks of Indians but none are present. They are, we suppose, gone to Fraser's Lake which is the post they frequent.

I have stated elsewhere that the Indians would normally be fishing for whitefish in November on the lakes. In 1828, the Company cached goods at Chinlac and found that the Indians had not bothered the cache (HBCA B.188/a/13). The reference may indicate that Chinlac was not heavily utilised by the Carrier by 1828 because presumably, the caching of Company goods would not take place in an actively used Indian encampment. I found no references to Chinlac in documents from later years.

The Population of the Study Area in Early Historic Times

As stated earlier, the population of four villages dependent upon Fort George (Cleet-leh Chala-oo-check, Little Lake, and Chinlak (sic)) was 121 individuals in 1822. Assuming Little Lake is not Cluculz lake, the average village

must have had a population of 25 to 50 people in 1824. As I mentioned, two of the villages , Cleet-leh and Chala-oo-check are near Fort George, and I suspect Little Lake is not near Chinlac so, probably, fewer than 50 people occupied the study area in 1824. By comparison, the population of the village of Nakazleh (Necoslie) on Stuart Lake was 72 people and that of Pinchi, also on Stuart Lake, was 74 people (HBCA B.188/a/2 fo.58). MacLean (1932:146) wrote of Nakazleh that, "the Indian village... consists of only five or six houses but every house is occupied by several families...."

Assuming that the Nakazleh village was occupied by 72 people (or so) in the 1830's when MacLean recorded this information, the average house must have contained 10 to 12 individuals. The archaeological site at GaRv 1, which had larger houses, must have been occupied by at least 100 individuals at some time and more are likely. Borden (1952: 32) recorded 6 individual hearths in House III at Chinlac. If each hearth represented a family of 5 or 6 individuals then the house was occupied by 30 - 35 people at some point. Chinlac may have been occupied by three or four hundred people in earlier times. However, historical evidence suggests that this site was not occupied by such numbers during the historic period. As I will describe below, there is a site (FlRv T28) right at the confluence which matches my population estimate much better. This site features three house impressions which are smaller than those at GaRv 1. If each house were occupied by the same number of people as the

Nakazleh houses, then 30 or 40 people probably lived at that site. These were probably the same people who lived on Cluculz Lake from November to July.

A Model for Settlement During the Historic period

It is probable that there were major changes in site use during the historic period. Historical records do not support the existence of a major village at the confluence of the Nechako and Stuart Rivers, nor at Cluculz Lake, from 1806 on. However, more extensive occupation at GaRv 1 must have occurred in the past as indicated by the large size of the site and the features which are present. On the basis of ethnographic evidence, one would also expect a heavy use of nearby lakes from late fall through spring because of the importance of lake fish to the historic Carrier (Hudson 1983: 173). In later times, people from Stoney Creek camped in the area while hunting, fishing, and trapping, and sites were occupied for brief periods while these activities took place. At some point in the past, a fundamental shift in resource exploitation and settlement must have occurred with the final stage being that no settlements, other than occasionally used camps, existed in the area.

The change in subsistence patterns may be partly attributable to a loss of population in the area. After population declined to a certain point, the remainder of the people went west to join their kin at Nautleh, Tachek, and Sy-cuz. A tendency to go to the west may have already been strengthened

by the positioning of a trading post on Fraser lake that had the Chinlac people as clients. There would not be any real advantage to remaining near Chinlac if there were too few people to build and maintain a salmon weir and to benefit from it. If there was a raid on Chinlac in the late 18th century, the population may have been low even before the Europeans arrived. Assuming a low population when Fraser came into the area, I would expect settlement to go through two phases.

1. In the early part of the historic period, from 1806 to 1825, a small number of people continued to occupy the study area and to exploit the resources in their season. There are no indications in the historical accounts of large settlements. In low salmon years, people left the area and went to the west. If population were below some critical number needed to maintain a weir, then a technology which could be maintained by a smaller group was used. There would be little advantage in staying at GaRv 1 under these circumstances because the water flows over a broad shallow area and the fish would not be concentrated, a necessity if traps and nets are to be effectively employed (presently, the Carrier use nets on riffles and eddies). Better locations are available, and one in particular, on the eastern bank of the Stuart at the confluence, seems ideally suited for the use of such technology. Since there would be fewer people in the area, one would expect that later sites would be smaller than they were in the protohistoric period.

The lakeside resource exploitation sites would probably be important and were inhabited in the late fall and early spring by a group of 25 to 30 people who lived in two or three houses of the style described by Morice (Figure 8). It is possible that trapping on the territories belonging to important individuals could be carried out from locations at Cluculz Lake. In that case, the sites there would be occupied throughout the winter also. The winter house style described by Morice (Figure 9) was in use during the early historic period (HBCA B.74/a/1 fo.18 (March, 1823). Nevertheless, there may have been an increasing tendency for individuals, groups of males (see Hudson 1983: 180), or individual families to move into areas where some private (i.e. not controlled by 'deneza') trapping could occur. This was apparently encouraged by the fur traders (Hudson 1983: 103). As trapping became a more general activity, and the fur trade developed, it is likely that band members would disperse to individual trapping territories during the winter months. Small sites on the northern shores of small lakes would result. In general, outflow sites would get smaller as time passed because they would there were fewer people using the area

In the later historic period there would be no year round residents at all. The type of year by year shifting of the location of the winter village described by Morice (1893: 184) may also have occurred at Cluculz Lake but I don't think that the village would be moved far from the places where the lake resources could be most profitably harvested. In other

words, all archaeological sites should be near the outflow of the lake and one could expect a horizontal displacement of sites around the outflow over time.

2. Perhaps as a result of repeated outbreaks of disease, but for other reasons as well, the area was virtually abandoned after 1830 and few subsistence activities took place there. The owners of resource locations took up residence at Stoney Creek and visited the area, with their families, for trapping and some fishing and hunting. Archaeological sites in later times will reflect the nuclear family socio-economic unit and be small in size. For a time, traditional houses were built but later tents were used for shelter (Morice 1893: 193). In the recent past, Carrier families from Stoney Creek came to Cluculz Lake, visited their ancestral territories, and fished on the lake. Sometimes, elders told me, an individual family would go to camp on the lake but at other times several families went together. I expect that these groups consisted mainly of women and children and contained 10 to 20 individuals. Of course, resource distribution did not change and sites continued to be near the concentrations described earlier. The presence of glass, porcelain, gun parts or flints, and trade axes indicates that a site was used in historic times (cf. Wilmeth, 1977:99).

Summary

Within the study area, the historic period began in 1806. As time passed, native settlement and subsistence patterns

were disrupted by the effects of the land-based fur trade. Subsistence was made possible in the area because of the connections, through the 'deneza', with the Skeena drainage and its salmon resources. but after the trade began, the control of the 'deneza' was lessened and population declined resulting in a tendency towards smaller socio-economic units. The combination of these factors resulted in a shift away from use of a weir at Garv 1 toward the use of traps and nets in fishing which were more appropriate for small group use. This technology would be inappropriate at Chinlac. Archaeological sites from the historic period are smaller than those from the protohistoric period, and have fewer and smaller house depressions whereas sites from the prehistoric period are similar in size to those of the historic period as I shall explain below.

The study area continued to be used throughout the historic period, although by fewer people, and early in the period permanent settlement ceased. Nevertheless, people from Stoney Creek continued to visit the area and trails passed through it which linked Fort George with Fort Fraser. Chinlac became a stopover for people travelling downriver from Fort St. James to Fort Fraser, and a place where goods could be cached, although the forks region continued to be used for salmon fishing by small groups.

CHAPTER 5

THE PROTOHISTORIC PERIOD

Introduction

In this chapter, I develop a model for the protohistoric period at Chinlac and the surrounding area. The protohistoric period is the interface between the late prehistoric and historic periods. Fontana (1978:23) states,

These are aboriginal sites in which there is evidence of nonaboriginal culture but which were occupied before the arrival of nonaborigines on the immediate scene. Such sites are post-Columbian (after 1492 A.D.) but pre-date either the actual physical presence of non-Indians at the site or their documentary description of the location.

In the central interior, the protohistoric probably began in the late 1770's as the maritime fur trade developed, and ended in 1806 when Simon Fraser came to the region. For the Carrier, the protohistoric period was a time of increased commerce with the coast and was perhaps the time when coastal forms were adopted (Hudson 1972:33; Goldman 1940: 333; Steward 1970: 208-209; Bishop 1979:151). Chinlac (GaRv 1) (Borden 1952:34) was occupied during the period. The maximum population density - concentration within the study area probably occurred during the protohistoric and many archaeological sites are attributable to that time, and can be better understood in the context of the period.

Settlement During the Protohistoric Period

As I stated in my introduction, a settlement system with two primary nodes (binary) is a feature of the protohistoric period. A hypothetical model of the system is shown in Figure 16; essentially it consists of a summer village occupied from July to October, and a winter village occupied from the beginning of November to the early summer of the next year. The model provides for occasional camps to exploit other resources (or for other reasons), and for the move to other watersheds in salmon-poor years (described above). The big difference between this system and the one described for the early historic is that the former sustained a larger group of people through use of a salmon weir at Chinlac resulting in a less mobile settlement pattern.

Perhaps the most important change which occurred among the Central Carriers in protohistoric times is that the influence of west coast cultures was stronger compared with the preceeding prehistoric period. Bishop has stated that the Carrier adopted hereditary rank positions during this period (1979:151) and there is the suggestion that some individuals achieved management roles which would facilitate the use of communal weirs (Bishop 1979:150; Hudson 1983:57-58). Goldman (1977:339) states that the Alkatcho borrowed the coast house style and constructed "crude counterparts" of it in the 19th century. According to Jenness (1929:23-24) quoted in Hudson (1972:26), Carrier culture changed as a response to coastal influences in the following manner:

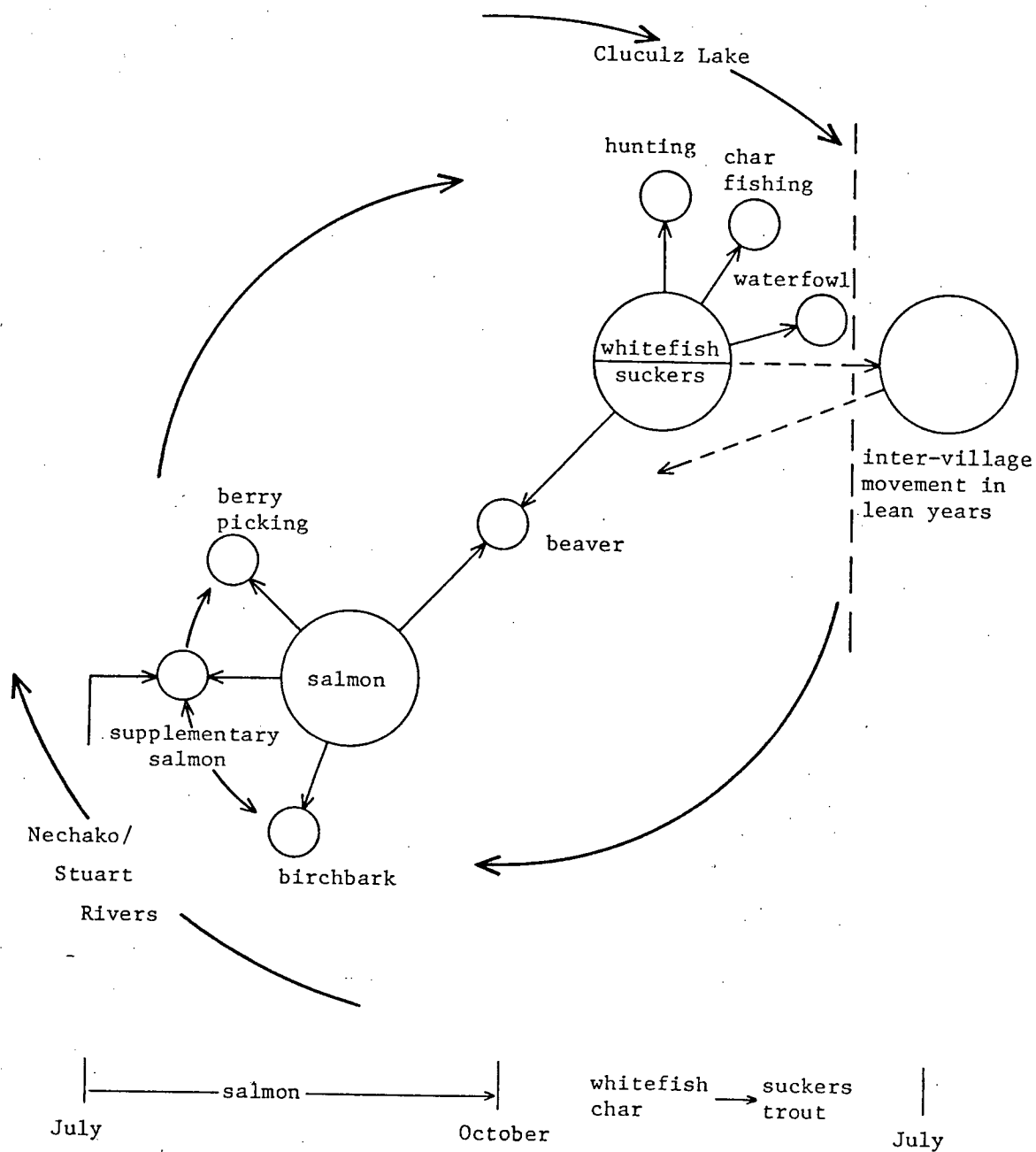


Figure 16. Site Use and the Seasonal Round for Carriers Within the Study Area During the Protohistoric Period.

1. Reorganisation of the social system.
2. Migratory hunting life partly superseded by fixed habitations at favourable fishing locations.
3. Change from a "loose structure" to a "rigid clan system" of nobles , commoners, and slaves.
4. Multifamily clan dwellings.
5. Matrilineal descent replaced patrilineal.
6. Status of women remained unchanged.

While Jenness refers here to changes in the society of the Bulkley Carrier who are neighbours of the Gitksan (and so would be more directly effected), some of his observations certainly apply to groups further inland (Steward 1970: 208-211). Hudson (1972: 26) states that the Stuart Lake Carrier adopted (matriarchy) and copied cremation and funeral poles from the Gitksan. Also, the 'deneza' established control over fishing and beaver hunting territory at this time. Elsewhere, Duff (1952: 28-29) states that the Central Carrier as far west as Prince George borrowed the phratry organisation of the Gitksan and that they had crests, titles of nobility and other priveledges which were inherited in the matriline. These changes came as a consequence of increased trade with coastal peoples who were acting as middlemen between the interior and European traders. They required the furs that interior peoples such as the Carrier could supply and, in return, they traded some European goods which were then taken inland (Bishop 1979:153-154).

I expect that the study area was occupied by more people in the protohistoric period than it was during the historic period when disease and other factors had begun to take their

toll. I might add that disease could be introduced from the coast even before the arrival of Fraser in 1806 (Fisher 1977:22). Intertribal warfare (the Chinlac "massacre") as suggested by Morice (1978:15) would probably be increasing possibly as a result of competition for the middleman role (Fisher 1977: 20; and see Ray 1974:19-23). A decline in the population of the study area could occur as a result of either factor in the latter part of the protohistoric period; Morice's raid by the Chilcotin on Chinlac remains a real possibility.

With a larger population, the site at GaRv 1 was an ideal location for a village because it is situated where a salmon weir could be built. The remains of large, rectangular houses are present and there is evidence of an occupation by a relatively large number of people. Wilmeth attributes a rectangular house to the protohistoric period in the Chilcotin (1978: 99). An occupation of similar proportions would occur at Cluculz Lake during the winter. The site at Punchaw Lake (Fladmark 1976 :19-31) has some features which may be expected at the lakeside sites. It is on the northwest bank of a creek at the outlet of the lake; it contains a large number of oblong house platforms; there is evidence that the houses were built in different locations every year; there are relatively few cache pits. Individual houses are described by Fladmark (1976: 26) and are approximately 8 m x 6 m. with long axis oriented northeast-southwest and a number of shallow post holes giving the impression of "light self-

supporting A-frame structures, bark or skin covered, partially sunk into the slope with vertical or apsidal down-slope walls". Significantly, the Punchaw Lake site is large and it is not near any salmon streams (1976: 19,21). I expect that the winter villages of the protohistoric period would be relatively large, much larger in fact than the winter camps of the historic and late prehistoric periods. Most of the people from Chinlac probably moved to the lake where they lived in family groups in A-frame houses such as that shown in Figure 9 which would be similar in size to those uncovered by Fladmark at Punchaw Lake. The winter village contained at least 10 houses (like Chinlac) and may have shifted around the outflow of the lake as firewood supplies were used up at a location, perhaps every year or two.

In his discussion of materials which distinguish the protohistoric occupation at Anahim, Wilmeth (1977:99) states,

With the exception of an iron knife blade, all of the protohistoric artifacts are ornaments and made of copper. In the historic units, iron objects predominate, and are in the form of utilitarian items: gun parts, containers, tools, nails, etc. In addition, artifacts of other materials make their appearance, including glass, ceramics, clay pipes, and beads... In the historic period, beaver which had predominated in protohistoric times, declined slightly, while muskrat showed a sharp increase.

At Punchaw Lake, Fladmark (1973: 30) found a piece of a trade axe, a piece of beaten and rolled brass (copper?), and a fragment of iron. The EuroCanadian artifacts from Chinlac will be discussed in Chapter 7.

Summary

I suggest a larger population for the study area in protohistoric times than would have been present in the historic period. A communal weir, controlled by 'deneza' who had the support and cooperation of village members, would be in use at Chinlac (GaRv 1) and the site would be extensively used at this time, and so would locations on Cluculz Lake. Summer villages such as Chinlac would show coastal influence in the form of coast style houses, and an increased presence of certain types of trade goods derived ultimately from Europeans. Summer sites will also exhibit signs of increased consumption and of ceremonials which would imitate coastal forms. Winter villages would also be relatively large and the resources of the lake would be necessary for survival; smaller, family-sized A-frame houses would be built on the north shore of the lake.

The pattern was maintained throughout the protohistoric period in spite of the periodic failure of the salmon which would force many people to leave the area in the winters when the shortage occurred. The protohistoric period probably did not last for more than 50 years.

CHAPTER 6

THE LATE PREHISTORIC PERIOD

Introduction

It is uncertain how long the study area has been inhabited by the Carrier but Borden concluded that Chinlac was occupied for approximately 100 years beginning at about 1700 A.D. which would indicate some occupation in the late prehistoric period (1952:33-34). Although Borden's estimate of the length of time Chinlac was occupied can be challenged, since it is partly based on his belief that a "fairly long occupation" is indicated by the size of the clearing occupied by the site, the suggestion that a late prehistoric occupation of the study area took place must be examined, and archaeological expectations for this period described. This chapter presents a hypothetical settlement and subsistence model for the late prehistoric period based on descriptions of the period from elsewhere, and on my own speculations about land use at that time.

Settlement During the Late Prehistoric Period

Helmer (1977:67) places the late prehistoric at 1300 to 1700 A.D. for the central interior and states that it is represented at Natalakuz Lake, Anahim Lake, Tezli, and Punchaw Lake. Chinlac was occupied at the end of this period

(Borden 1952: 34). Diagnostic artifacts include "several varieties of small side-notched projectile points, several varieties of corner notched points, flaked and ground stone adzes, bone points". Historic period indicators are not present and there are few trade items from the west (Borden 1952: 34). As stated, Helmer (1977a: 77) has concluded that there is evidence for three stages of development in Carrier lifeways and postulates that earlier periods would be characterised by the composite or patrilineal band, the late prehistoric and early historic period by a transitional matrilineal-based phratry system, and later times by nucleated families exploiting individual trapping territories. Kobrinsky (1976: 201) states that there is no direct evidence for the composite band stage, but he seems to argue for regional bands and against the conclusions of Dyen and Aberle (1974) which favoured an ancient matrilineal system originating in the Carrier homeland. It is beyond the scope of this thesis to attempt further research in this area; however, there seems very little archaeological evidence for large groups near or in the study area before the protohistoric period, and there is nothing to suggest the 'deneza'-weir mode of production described by Hudson (1983: 57) until later times.

I propose that a smaller economic unit, perhaps like the composite band, operated in late prehistoric times, a period before there was a great deal of traffic with the coast. The population of the area was lower than in the protohistoric

period and sites occupied will not show marked signs of coastal influence. As very little archaeology has taken place in the area, it is difficult to describe settlements of the period but I expect both the summer salmon-procurement camps and the fall/winter/spring camps were small and composed of several families. Of course, one must distinguish between lakeside sites and riverside sites and it is worth noting that most excavation in the central interior (with the notable exception of Chinlac) has been carried out on sites not connected with the salmon fishery. At Punchaw Lake, which I believe was occupied from November to June, Fladmark (1976: 30) found evidence of occupations to 4000 B.P., but it is uncertain if significant change in house styles occurred through time. Apparently, the small A-frame (8 m x 6 m) undoubtedly used in winter persisted and probably were occupied by a family group of some sort. It is possible that, in the prehistoric period, more people gathered at the lakeshore for fishing than at salmon procurement locations (Fladmark (1976: 21) found 43 house platforms at Punchaw Lake). Presumably, lake fish harvesting could be profitably pursued without the control and organisation of the 'deneza'. On Cluculz Lake, the principal area for lake fishing and settlement during the fall, winter, and spring was at the outflow of the lake. Small camps used for special purposes (perhaps by hunting parties, trappers, berry-pickers, or trappers) similar to those referred to for the protohistoric period (in Chapter 5) existed in the late prehistoric period.

Summer houses were probably also smaller, and perhaps of a different style, than they were in the protohistoric and early historic periods, and they were situated differently within the site than houses were in later times. There is virtually no information available on summer house styles of the late prehistoric period, and it is easier to say what they were not like than otherwise. Large rectangular, multifamily coast-style houses arranged in line along the river bank would not be a feature of the late prehistoric, at least during the earlier phase of this period.

The Carrier would not prefer weir locations on the Stuart and Nechako Rivers, but would instead choose places where smaller technology such as the traps described above could be used. These locations will be places where the river is constricted, or at riffles or eddies. It is, I believe, probable that the organisational structure of later times, which featured the 'deneza' as controllers of fish weirs, did not exist in the early part of the late prehistoric period (see Goldman 1941:348). Certainly, their power was completely undermined in later times when capitalism encouraged patri-local residence groups (Hudson 1983:2). Kin ties with western groups may not have been developed at this time, and the option of going west in lean years may not have existed, possibly making lake resources more important than salmon in earlier times.

Summary

In a way, settlement during the late prehistoric resembles that of the historic period. Both lake and river resources were used but these were exploited by smaller groups of people than was the case in the protohistoric period. Lacking the control of the 'deneza' and the numbers necessary to maintain a weir, the people would tend to go to locations on the rivers where fishing technologies which could be used successfully by small groups were employed. Archaeological sites from the late prehistoric times will be smaller than sites from the protohistoric period particularly if the site was occupied during the summer. It is also unlikely that large, rectangular, coast-style houses were built in earlier portions of the late prehistoric period.

From November to July settlement would occur near the outlet of Cluculz Lake. It is possible, in view of the relatively large size of the Punchaw Lake village, that the settlements on the lake would actually be larger than those on the river. This unexpected situation might occur if control by 'deneza' were necessary before large river weirs were built. As stated, there is little evidence which suggests that the 'deneza' were a feature of the prehistoric period. If such were the case then individual summer riverside sites might be occupied by two or three extended families who then joined other families on the lake in the fall of the year. It

is difficult to predict how long a group would occupy a single location because this would depend upon firewood availability and rate of use. There is, of course, every reason to expect that some archaeological sites in the area will be quite old, similar to the site at Punchaw Lake which dates to 4000 B.P. (Fladmark 1976: 30).

CHAPTER 7

THE CHINLAC VILLAGE SITE

Introduction

The records and materials from Borden's excavation of Chinlac (GaRv 1) are examined in this chapter. Chinlac is an important component in the regional settlement patterns and has been partially excavated. It is important to determine the season during which the site was occupied and the archaeological period when it was most extensively used; these subjects orient much of the analysis described in the chapter. There can be little doubt that the situation of the site is directly related to the fact the inhabitants could build a salmon weir at that point and take advantage of the Stuart River salmon run. The Nechako, a river with a better salmon run (see Chapter 2), is too swift and deep for weirs to be built across it in the Chinlac area (Morice 1978:187).

The Chinlac Village Site was excavated by Charles Borden in the summers of 1950 and 1952. The work was prompted by the decision of the Aluminum Company of Canada to build Kenny Dam at the head of the Nechako River (Borden 1952:31). Although Chinlac was not threatened by this project, Borden decided to excavate the site so that he might better understand Carrier prehistory, before he did salvage work in areas which would be flooded by the dam. According to Roy Carlson (1979: 234), who took part in the project, Borden hoped to "lay the

foundation for the direct historic approach to Carrier pre-history". As a result of his investigation, Borden was able to state that Chinlac represented "Carrier culture during late prehistoric times and at the period of early contact" (Borden, 1952:34).

The Borden Excavation

Parts of this chapter consist of excavation reconstructions which were not directly described or summarized by Borden. I base these reconstructions on Borden's site notes and on my own analysis of the excavated materials, which I undertook in 1981 (n.d.). Lithics were analysed by Magne (Magne and Matson 1984) and I draw on his research in that area; Borden's preliminary report (1952) was also useful. It must be stated that examination of site records did not reveal the rationale for some procedures, nor did they provide the reasons why certain decisions were made. There is no way of knowing, for example, why Borden chose to excavate House III. The site was treated as a single component site and records of the stratigraphy and the vertical distribution of artifacts are not complete. The stratigraphic profiles included in the chapter are composites and reconstructions. I also plotted the horizontal and vertical distribution of artifacts from descriptions in the field notes.

Chinlac is located in a semi-circular clearing on the west bank of the Stuart River, approximately 1000 meters from

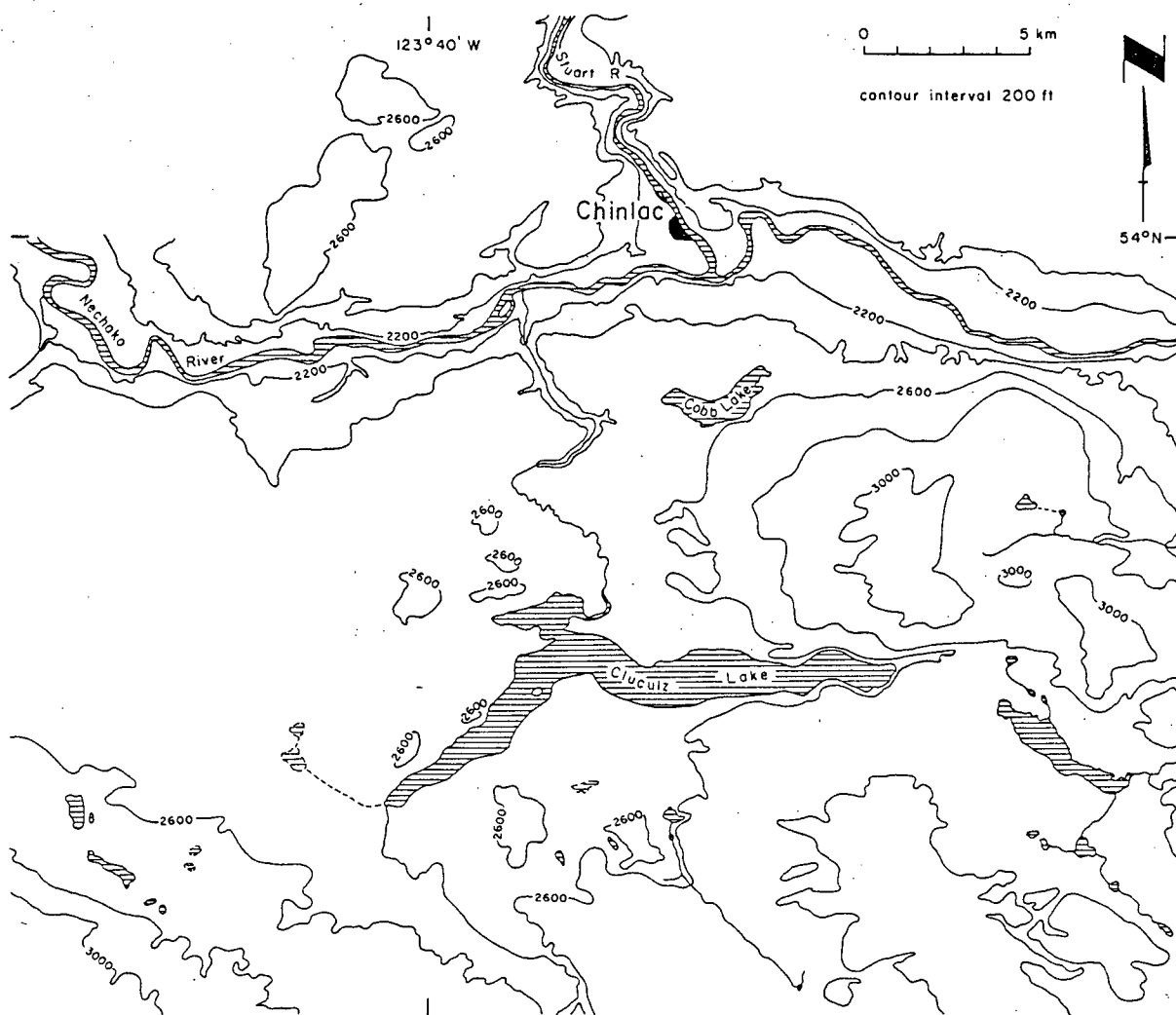


Figure 17. The Study Area Showing the Location of the Chinlac Site.

its confluence with the Nechako (Figure 17). Still clearly visible are 10 large rectangular depressions, which Borden identified as house depressions, and a smaller depression which seemed to be the remains of an auxiliary structure (1950: site notes). The average size of the depressions is 8 x 13 metres, and they are in a row along the river bank with their narrow ends facing the water (Figure 18). In addition, there are more than 1800 cache pits associated with the site. These are found along two low, sandy ridges in the forest to the west of the clearing. The cache pits are typically one to two meters in diameter, and are presently one to one and one half meters deep.

Borden conducted the excavation in the following manner. He laid out a primary base line running north/south and a secondary baseline running east/west. House III was gridded into 5 foot squares with the primary baseline as 0 feet west. Seven "trenches" were created which were each 5 feet wide and were numbered 1 to 7. The "trenches" began at 10 feet east and ended at 45 feet west, making a grid 55 by 35 feet. Each "trench" was excavated square by square and the north/south and east/west coordinates recorded for all recognisable artifacts. The approximate depth below surface was recorded for many of the finds. Materials were screened through 1/4 inch mesh; detritus, faunal remains, and everything not classified as artifacts were placed in bags for later study (Associated Materials). Fire-cracked rock was piled to one side and not recorded. The 5 x 5 foot square was the main reference unit.

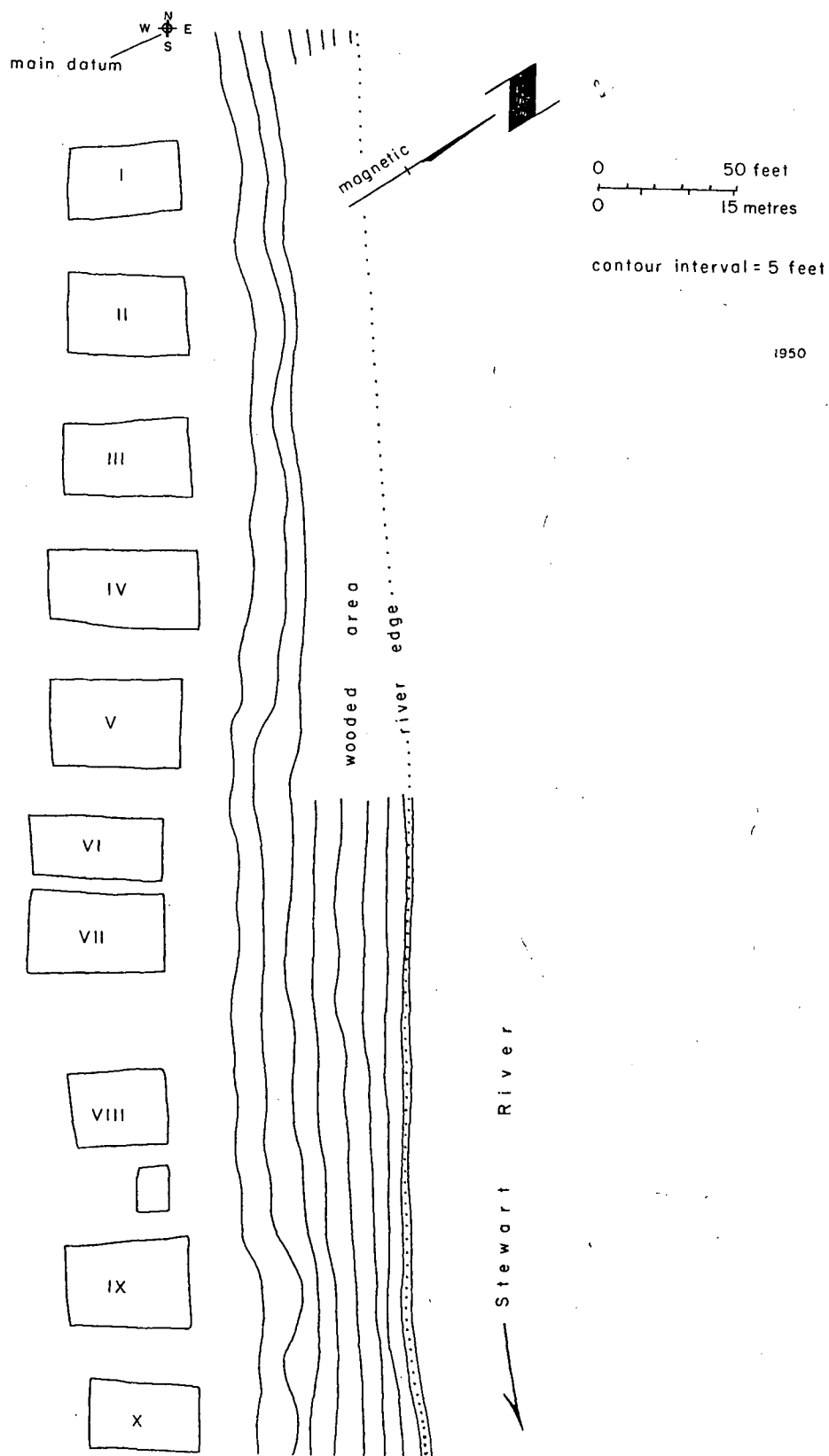


Figure 18. The Chinlac Village Site (From the Site Notes of Charles Borden. U.B.C. Laboratory of Archaeology, 1950).

Description of Stratigraphy

As I have indicated, no complete stratigraphic profiles are available for the site. The stratigraphy described here is almost entirely reconstructed from site note descriptions. The locations of all three are shown on Figure 19.

Profile 1(Figure 20)-The wall of the excavation at 45 feet west

Strata- The uppermost stratum is dark topsoil with an apparently high charcoal content. At the southern end, this is mixed with fire-cracked rock, a grey ash, and roots. A discontinuous lens of charcoal underlies that stratum between S.135 and S. 140. An intrusion of yellow sandy soil mixed with wood mold and roots occurs between S.140 and S.145, cutting into a second discontinuous charcoal layer which lies at approximately 5 inches below the surface. There is another thin layer of charcoal, with brown, sterile soil above and below, between S.155 and S.160 and yet another between S.155 and S.160, 12 inches below the surface. Strata are disturbed at the southern end of the wall and there is considerable mixing of charcoal, cracked rock, roots, and organic soil. Mixing also occurs at the north end but lenses of yellow soil, grey ash, brown sub-soil, and a charcoal-rich dark earth can be distinguished. Grey ash underlies most of the charcoal with the exception of the thin layer at the base of the deposits between S.140 and S.150. Maximum depth of the cultural deposits in House III is approximately 14 inches.

Profile 2 (Figure 21)- a wall at 25 feet west

Strata- There is considerable mixing of deposits at the southern end of the wall. A dark soil mixed with charcoal is the most common material and at least 2 separate layers are distinguishable at S.165. Between S.160 and S.165, habitation floor material is mixed with gravel and other debris which suggests fill. There is an interesting stratum of yellow soil which underlies part of a discontinuous charcoal lens between S.145 and S.150. There appear to be 3 discrete charcoal lenses between S.135 and S.145.

Profile 3 (Figure 22)- the longitudinal axis of House III

Strata- At the west end, 6 distinct strata can be distinguished. There is a layer of fire-cracked rock and charcoal between W.40 and W.45, and a covered post hole is evident. Several strata are composed of a mixture of charcoal and dark soil and these are interspersed with layers of ash and burned

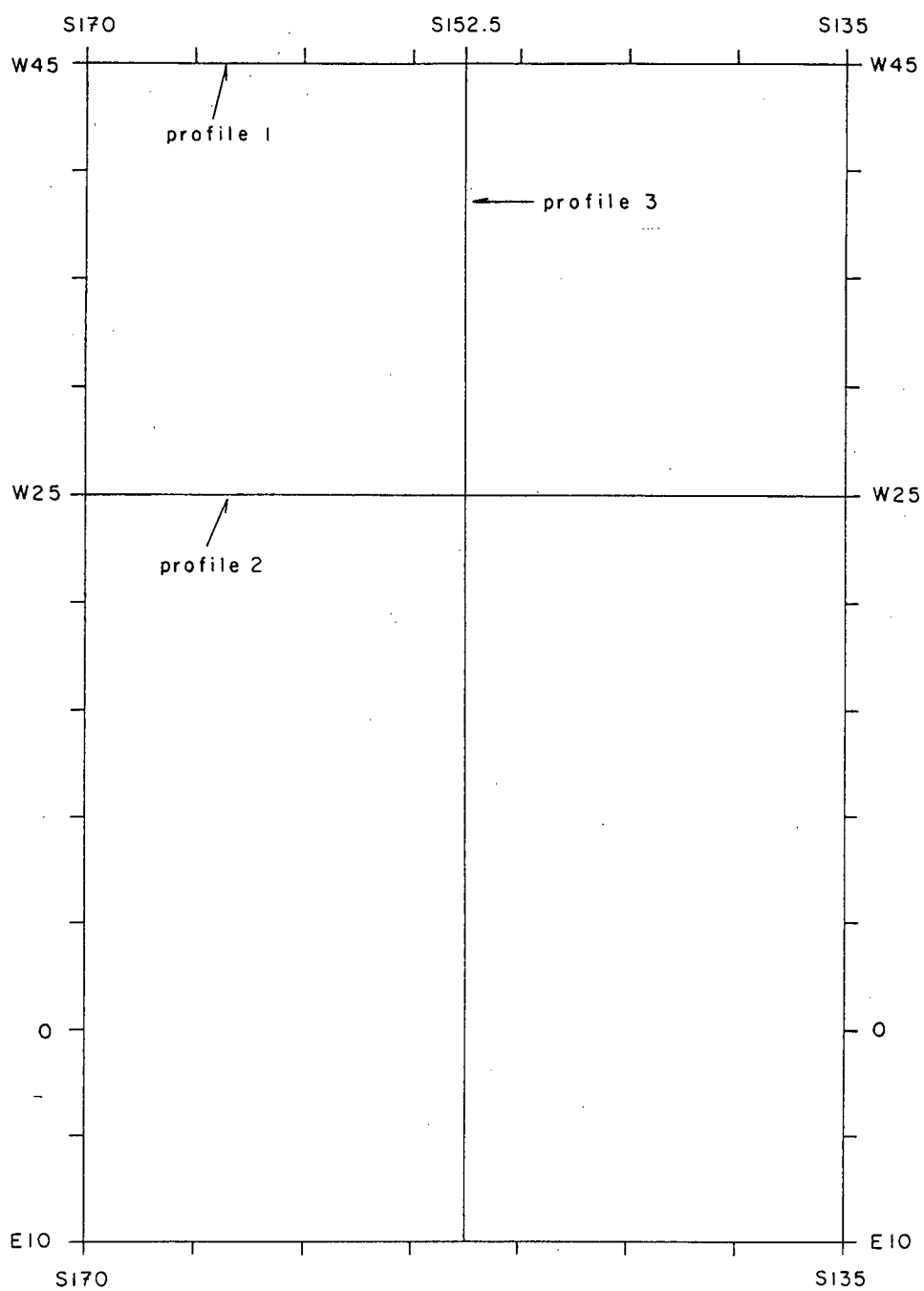


Figure 19. Location of Stratigraphic Profiles For House III, the Chinlac Site (GaRv 1).



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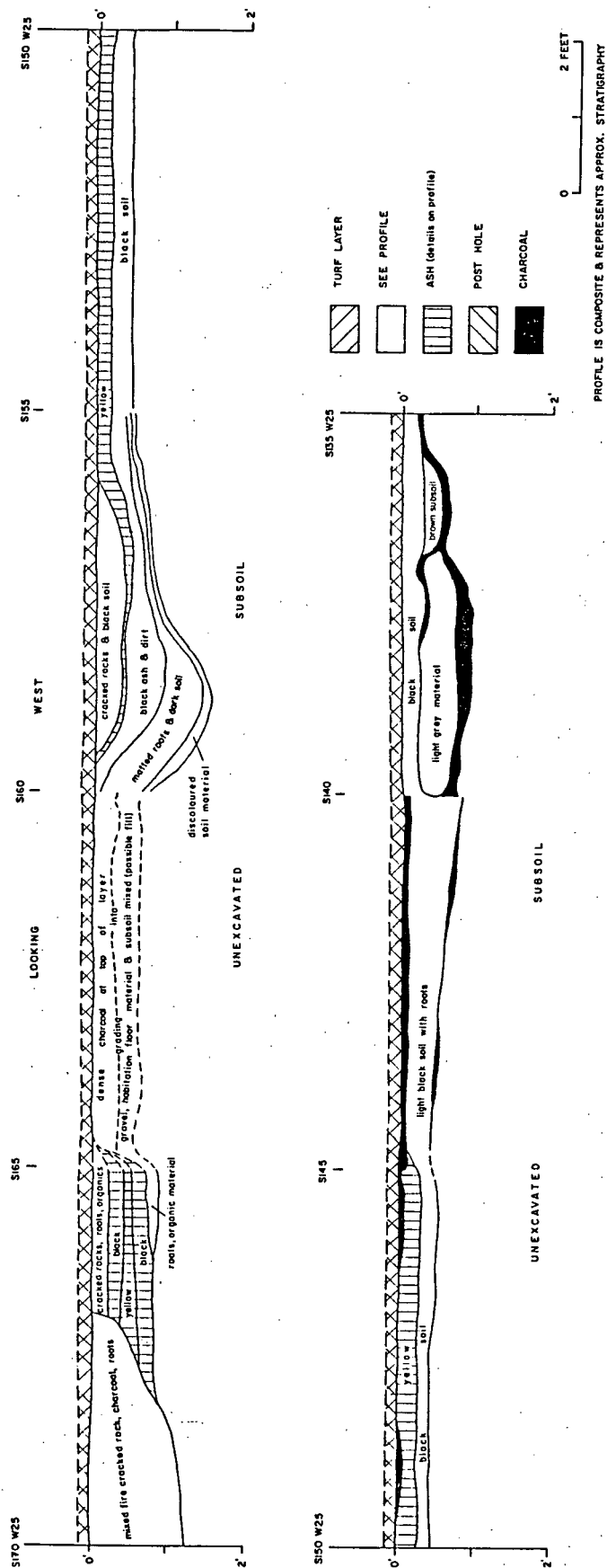
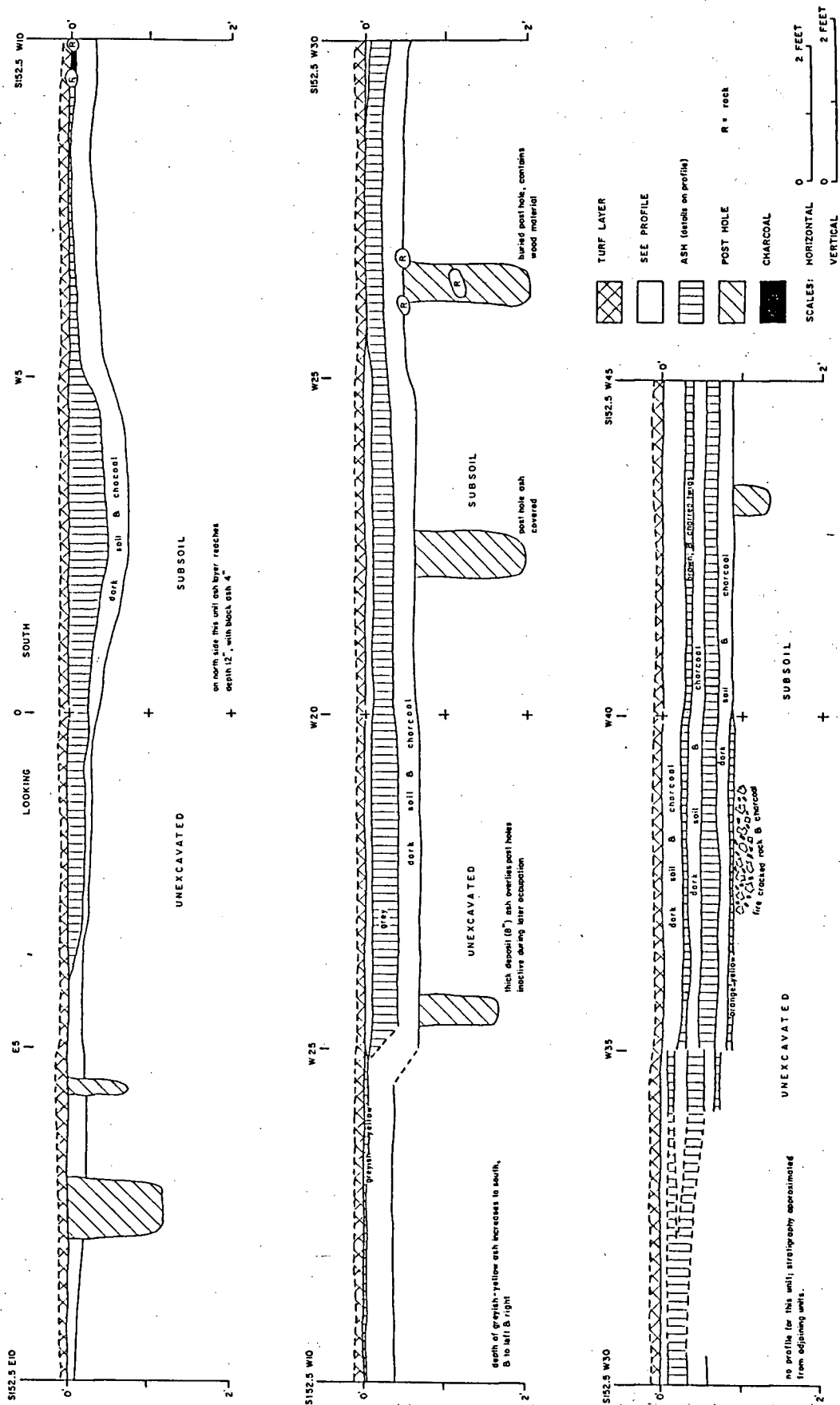


Figure 21. Profile 2. A Wall at 25 Feet West, House III, Chinlac (Summary on p.99).



material. Deposits of habitation floor materials decrease in depth from west to east. A heavy layer of ash, up to 4 inches deep, underlies a layer of dark soil and charcoal, almost certainly containing fire-cracked rock. Three postholes, covered with ash and other materials, are located between W.15 and W.30. These are approximately 8 inches in diameter and one of the holes contained small rocks. At W.10 there is a small deposit of charcoal, surrounded by rocks, just below the surface. Cultural deposits are shallow at the east end of the house but there are 2 postholes which are not covered by ash or debris, at that end.

Profile Summary and Discussion

Profiles indicate that the site was re-occupied a number of times during its history. The presence of some lenses of sterile soil, buried post holes, and possible prehistoric excavation into earlier deposits suggest multiple occupations and at least 6 are indicated by charcoal layers. A number of postholes were buried by later deposits but some were not. No slanted postholes were uncovered (Borden Unpublished Site Notes), a situation which can be compared with Punchaw Village where post holes were at a variety of angles (Fladmark 1976:26). The rocks in one posthole may have been used to support the post. The patch of charcoal at S.152.5 - W.10 is probably the remains of a campfire from a later period. The deep ash layer would seem to indicate intensive use over a long period (one or two boat-shaped hearths ?); however interruptions or distinctions within the layer were not described by the excavators. Borden (1952:32) indicates that 6 individual hearths, in 3 pairs, were present.

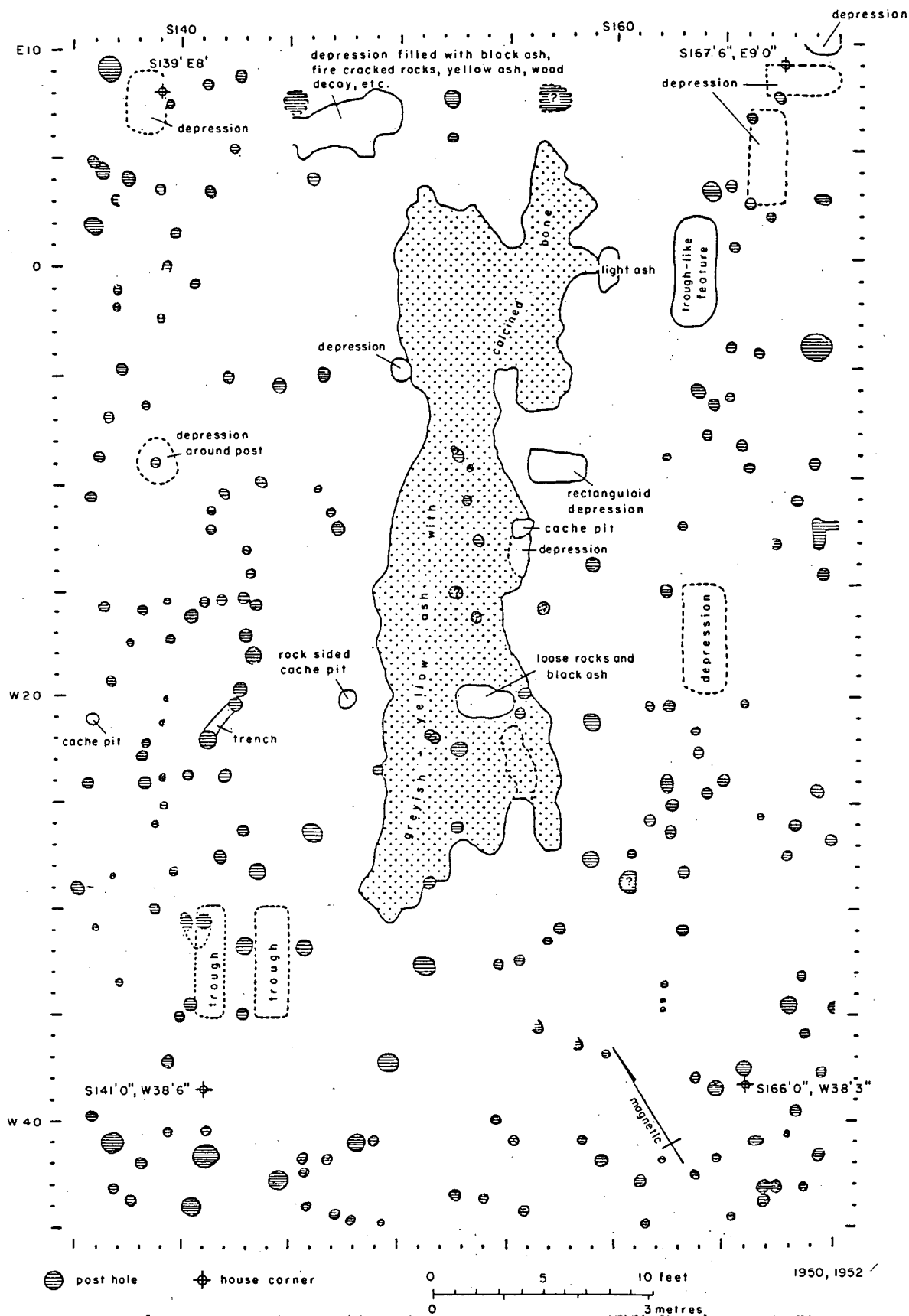


Figure 23. The Borden Floorplan for House III, Chinlac
(Unpublished Site Notes of C.E. Borden, 1952,
U.B.C. Laboratory of Archaeology).

Floor Plans

I examined the floor plan drawn by Borden for indications that one or more of the house styles described by Morice (see Chapter 3) might be represented. I found that the unpublished Borden plan (Figure 23) was actually a composite of all the post holes uncovered during the excavation and that the plan was too confusing to be useful. In order to simplify the floor plan as much as possible, I drew a second plan (Figure 24) which shows only those post holes which were not covered by ash, charcoal, and dark soil (described in Borden's site notes as "habitation floor"). Where there was no clear indication of the status of a post hole I considered it active and not covered. Obviously, this is far from satisfactory but some features emerge which may be significant.

Borden (1952:32) stated that two large post holes and two smaller post holes (in line) were indicators of a central ridge pole, and that numerous small post holes ran along the side, giving him the impression of a large rectangular house. If this is the case, then a summer rather than a winter house is indicated. The revised floor plan more clearly shows paired post holes similar to those shown by Morice (1893: 188) on his floor plan of the Carrier summer house (Figure 8, page 45). The Carrier winter house, on the other hand, had four posts in a rectangular configuration which supported split poles slanted and driven into the ground (see Figure 9, page 46). The absence of evidence for slanted poles of this type makes it difficult to

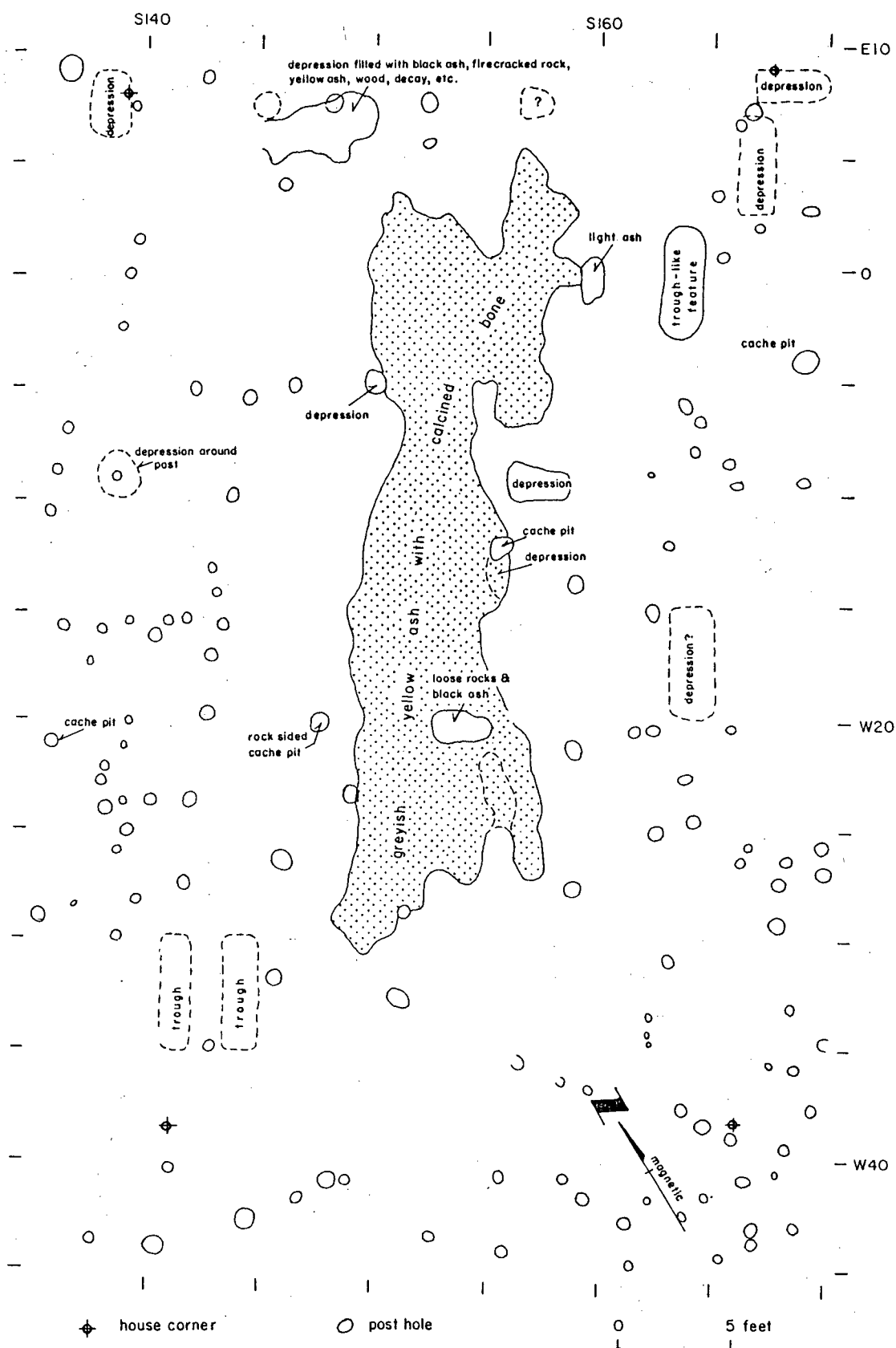


Figure 24. Revised Floor Plan For House III, Chinlac, Showing Postholes Which Were Apparently Active in Later Occupations. Paired Postholes Are Shaded.

envision a winter house on the location. Moreover, the door of a house oriented in the same manner as the depression would face almost due north, a poor choice for a winter house. The floor plans present a confusing array of post holes and other features suggesting a variety of structures and of house orientations over time but there is little to indicate year-round occupation.

Artifacts

I examined the artifacts from Chinlac for two reasons. I wanted to confirm that the period of most intensive occupation for the site was the protohistoric and I was hopeful that some artifacts would be present which would indicate the season of occupation. I found it useful to work with only a few categories of artifacts including projectile points and fragments, birch bark rolls, and European trade-related materials, however I do discuss other lithics briefly. Borden recorded over 1900 artifacts and many more have since been catalogued by Matson and Magne.

Projectile Points

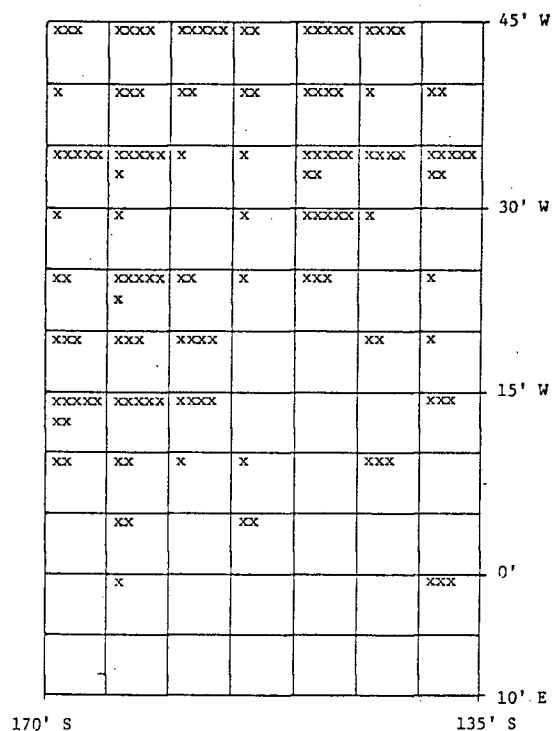
The excavation produced a large number of projectile points which Martin Magne has analysed and classified (Magne and Matson 1984:328,330). In all there are 127 points and point fragments including 55 Side-notched, 54 Stemmed, 16 Kavik Points, and 2 Corner-notched Points. According to Magne and Matson's analysis, the side-notched points are well in accord with what might be expected from the Protohistoric

Athapaskan period in the interior of British Columbia
(Magne and Matson 1984: 328,330).

The points were not evenly distributed throughout the excavated area and some clustering is noticeable. One group of points occurs in a block comprised of 6 five foot squares in the south central part of the excavation where 36 points were found. A second concentration occurs in the southwest corner and a third in the northwest corner. There are few projectile points in the central area or in the eastern part of the excavation. This contrasts with the distribution of Euro-Canadian artifacts which were mostly found in the front center area (Figure 25). Two alternative explanations are feasible which might account for this difference, one that it indicates multiple occupations and two, that there is an unnamed activity difference in different parts of the house. Most projectile points were found near the surface, with 60 in the first 5 inches of the deposit. However, other indicators (including the fact that houses have been rebuilt on the location) make a temporal difference most likely.

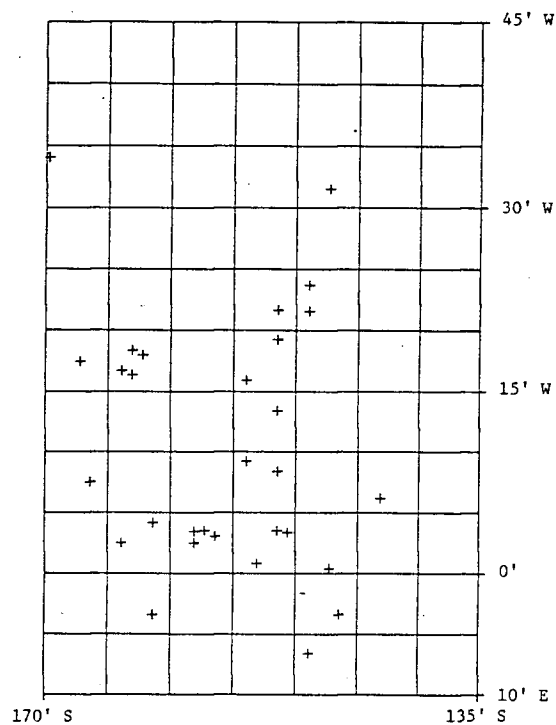
Other Lithics

Magne has classified other lithics from the site. The preferred material for tool making seems to have been a fine-grained basalt which is not local. Most tools are made of this material but some are made of chert, and some obsidian was used. There are some fragments of ground stone adzes which were made from a low grade of nephrite, and some river cobbles seem to have been used as tools. Unifacial retouch



x = projectile point

a



+ = 1 artifact (includes artifacts of native manufacture but European materials)
N.B. - less Ch 1511 (22 caliber bullet, modern)

b

Figure 25. The Distribution of Projectile Points Compared to the Distribution of Euro-Canadian and Chinese Artifacts in House III, Chinlac. a - Projectile Points; b - Euro-Canadian and Chinese Artifacts.

flakes easily form the largest single artifact group but large numbers of utilised flakes and "multiple edge" unifaces also occur. No microblades, core tools, "sinuous edge" unifaces, or spall tools were present. Wedges are well represented and so are formed bifaces. According to Magne and Matson, the Chinlac lithics are in accord with what can be expected for Protohistoric Athapaskan in the interior of British Columbia (Magne and Matson 1984: 328,330).

Birchbark Rolls

Large numbers of birchbark rolls were recovered during the excavation. Most are less than 10 cm. long and many have burnt or charred ends which lead Borden to suggest that they were used as torches (1952: 33) or that they are the debris from the construction of baskets or containers which was then burnt in the hearth. Bark containers were important during the summer salmon and berry-picking seasons (Morice 1893:123-124). Turner (1979:195) states that bark was collected in the late spring and early summer and Anderson et al (1981:32), writing of Starr Carr, mention that Clark thought that the presence of birchbark rolls there indicated a summer occupation. Most of the rolls were found near in the western half of the excavation. There is no suggestion in the ethnographies that birch bark was used by the Carrier in the construction of their houses.

Artifacts Made of Ground Bone and Antler

Artifacts of bone and antler may be indicators of seasonality. The site at Punchaw Lake, which was probably not occupied during the salmon season, produced very few bone artifacts (Fladmark 1976:30) and none were found at the WestLake site by Hudson (1972). Some ground bone or antler artifacts may also be associated with particular seasonal activities such as the spearing of beaver or salmon (Morice 1893:67-68).

Due to the scarcity of ungulates in the region, bone was more commonly used than antler, and beaver ulnae awls are more common than any other bone or antler tool. Morice states that awls were used in the construction of birchbark baskets and containers (1893:122). Beaver incisors (4 longitudinal fragments) were also found and may have been used as tools. The Carrier used beaver incisors as knives for carving (Morice 1893: 52).

There were several slivers of ground bone which may beleister barbs or fish hook parts as described by Morice (1893:71-72). The modified scapula of a deer was recovered and is probably a scraper (Morice 1893 :68-69). Also found was a ground bone harpoon part, curved slightly and approximately 10 cm in length, similar to an artifact manufactured of beaten copper described below. I was unable to find a description of this article in the ethnographies but Morice does mention that harpoon tips were among the five kinds of

objects which the Carrier made of copper (1893: 138). This piece of equipment was probably used to spear beaver, chinook salmon, or sturgeon, all of which would be sought during the summer and fall.

Antler was used for several small projectile points and a point fragment was barbed in the manner of a harpoon. Morice states that barbed bone harpoons were used to catch beaver (1893: 67-68) and the presence of this artifact indicates that this activity was carried out from the site. Borden also recovered a number of burnt and broken bone fragments, some of which were incised.

Summary

Bone and antler artifacts indicate that the site was occupied during the summer and fall of the year. Beaver ulnae awls were used in the manufacture of birch bark baskets and birch bark was gathered in the early summer. The presence of harpoon and spear points of bone and antler indicates that chinook, and possibly sturgeon, were taken near Chinlac. Beaver hunting (in either fall or spring) is evidenced by a bone point tentatively identified as a part of a beaver spear. The presence of some antler may also be indicative of a fall occupation.

Euro-Canadian Artifacts

Thirty artifacts were recovered during excavation which were either made by natives from European materials or were unaltered trade items. These help to establish that a proto-

historic occupation occurred at the site, and are indications of a coastal trade connection. The artifacts form a group with some important characteristics, and is defined in part by the complete absence of important historic period indicators such as gun parts, glass, or porcelain.

There are 6 artifacts made of copper (excluding the Chinese coin described below) including 4 tubular beads (Ch 237, CH 465, Ch 1639) of a kind found elsewhere on the Plateau (Wilmeth 1978: 243; Quimby 1966: 29-32). The beads range in size from slightly less than 2 cm to 5 cm in length (Plate 1). They seem to be manufactured from ship's copper, a type of sheet copper traded widely on the coast during the 18th and 19th centuries (George MacDonald, pers comm), and they are not soldered. Other copper artifacts include the harpoon part (Ch 774) referred to above, and a long (9 cm) pointed implement made of tightly rolled metal which may be an awl (Ch 809).

Borden also found a Chinese coin from the Sung Dynasty (Ch 608). Unfortunately, coins of this type are not reliable chronological indicators because they remain in use for centuries and the same type were often minted for a very long period (Richard Pearson, pers comm). Chinese coins were trade items and were used by the Indians to decorate costumes, and also for jewelry. There is some slight evidence to suggest that such coins were on the coast as early as 1750 (Beals 1980: 58-72). Between 1785 and 1814, 152 British and American ships from the China trade visited the coast (Gibson 1981: 70-71).

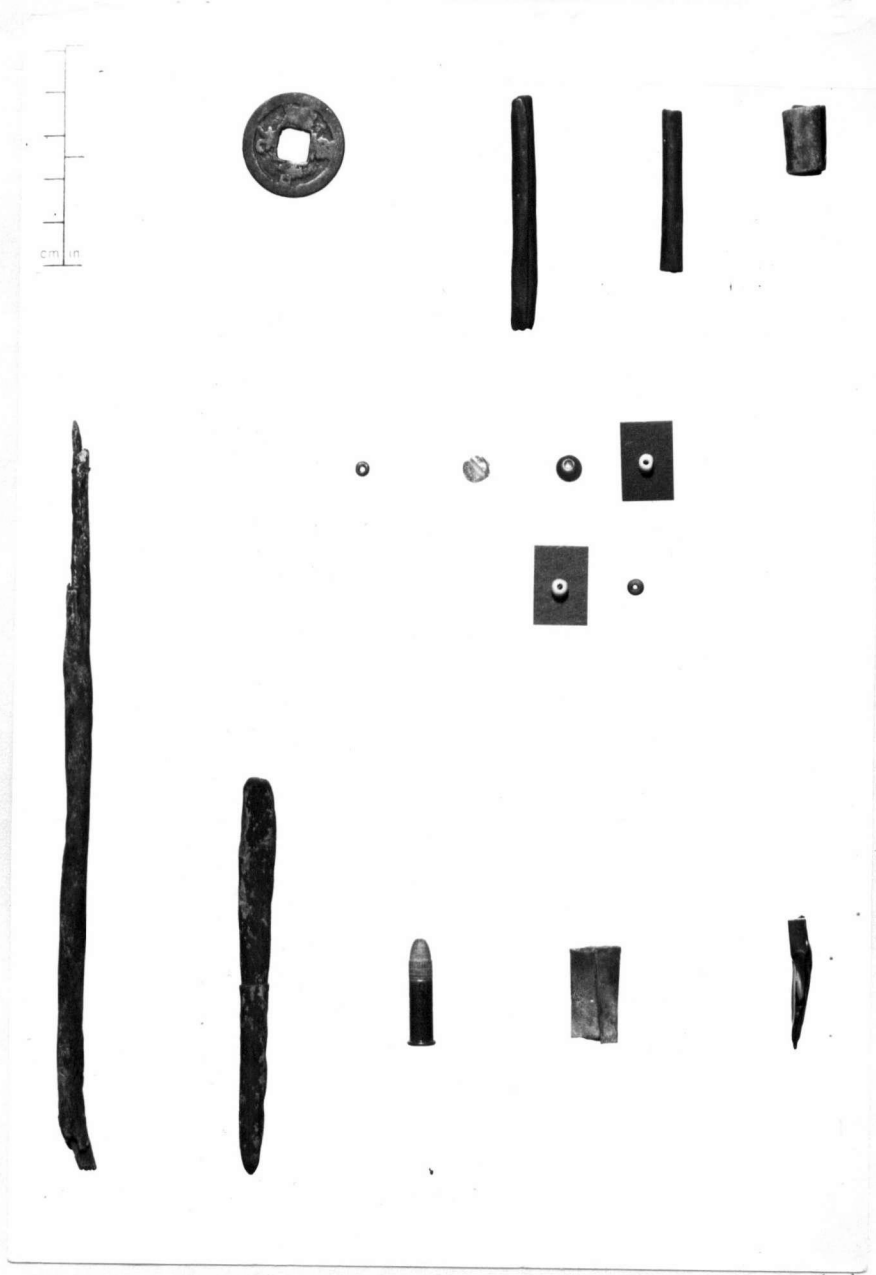


Plate 1. Euro-Canadian and Chinese Artifacts Recovered From House III at Chinlac by C.E. Borden.

From Top, Left to Right: Ch 608 (coin), Ch 237 (bead), Ch 465 (bead, Ch 1639 (bead). Second Row: Ch 233 (bead), Ch 239 (bead), Ch 914 (bead), Ch 610 (bead). Third Row : Ch 283b (bead), Ch 283a (bead). Fourth Row: Ch 1809 (awl), Ch 774 (harpoon), Ch 1511 (cartridge), Ch 616 (metallic fragment).

Some iron artifacts were also recovered, including a fish hook (Ch 336) or awl made of iron wire and an awl of pounded metal (Ch 712) (Plate 2). Several projectile points (Ch 222, Ch 343, Ch 462) and a rusted knife blade (Ch 221) were also found and a portion of a "strike-a-light" (Ch 307) was recovered which is similar to the "Hudson's Bay" fire steel described by Russell (1967: 350-351). Borden reported finding an iron nail and a piece of a file but these are no longer in the collection. Several badly rusted fragments of sheet and bar iron (Ch 1572a, Ch 1572b, Ch 309a, Ch 309b, Ch 285, Ch 238, Ch 219) were also found.

Several trade beads were found by Borden including 2 small, white "seed" beads (Ch 610, Ch 283b), 2 "Cornaline d'Aleppo" beads (Ch 233, Ch 283a), and 1 and 1/2 Blue Venetian beads (Ch 239, Ch 914). Although Kidd and Kidd (1970) have established a bead typology, no chronology is available. Arthur Ray (pers comm) judges that the beads could have been traded during the 18th century, in other words during the protohistoric period. Several dentalium shells were also found; Morice reports that these were used as beads by the Carrier (1893: 170).

Faunal Remains

Faunal remains are often important indicators of seasonality at archaeological sites. Borden mentioned in his site notes that few faunal remains were present because most bones were burned in the hearth but he was able to collect some larger bones and bone



Plate 2. Euro-Canadian Artifacts Recovered by C.E.Borden from House III at Chinlac.

From the Top, Left to Right: Ch 1572a (iron fragment), Ch 1572b (iron fragment), Ch 309a (iron fragment), Ch 309b (iron fragment), Ch 285 (iron fragment), Ch 238 (iron fragment). Second Row: Ch 219 (iron fragment), Ch 222 (projectile point fragment), Ch 343 (projectile point), Ch 462 (projectile point), Ch 221 (knife blade). Third Row: Ch 336 (fish hook), Ch 303 (wire), Ch 281 (spring?), Ch 712 (awl), Ch 307 (fire steel).

fragments. Salmon bones were not well represented, probably because of the preservation methods used by the Carrier (described in Chapter 3).

The bones of beaver (Castor canadensis) were the most common of all faunal remains (Appendix 1). Of the 72 identifiable elements present, 37 are from beaver and at least 6 of these bones are modified ulnae which were probably used as tools. The majority of beaver bones are those of the leg and foot. Ethnographically, beaver was used for feasts and was the property of certain individuals (as described in Chapter 3). The presence of leg bones, with few ribs or other body parts, may indicate some pattern of meat distribution based on status. Wilmeth (1977:99) noted that beaver bones were common at Anahim during the protohistoric period. The hunting of beaver took place in October and November (as well as in the spring) and so could have been carried on at the site before people moved to Cluculz lake for fall fishing.

The bones of several other animals are indicative of summer use. The bear (Ursus americanus) was hunted during the summer salmon season, and the swan (Olor buccinator) was caught during the summer moult (see Chapter 3). Six shell valves of the freshwater mussel (Margaritafera sp.) were found and these could not have been caught in winter. A number of other species are present including dog (Canis familiaris), porcupine (Erethizon dorsatum), squirrel (Tamiasciurus hudsonicus), and muskrat (Ondatra zibethica) but these do not seem to be indicators of seasonality here.

Summary

There were two principal reasons why I chose to re-examine the Chinlac materials. First, I hoped that by examining the faunal remains and other seasonality indicators I could determine if, as I suggested above, the site was inhabited during the salmon season only, or if Borden's suggestion of a year round occupation were more appropriate. I also hoped that Borden's site notes would contain more information on the type of structures which were present at the site. Of use here were the descriptions available in Morice (1893) of the house styles used by the Carrier at different times of the year. A clear indication that a winter house was represented would provide support for Borden's conclusions. The absence of evidence for a winter house, taken in the context of the location of the site and other factors, would tend to strengthen the alternate view that the site was seasonally occupied and the inhabitants went elsewhere in winter. Second, more description of the site was needed so that the protohistoric period in Carrier culture history might be better understood and defined. This is particularly important in view of the importance of the site to this study, and to other studies of Carrier prehistory.

There is very little evidence which, in my view, supports a year round occupation for the site. The function of the site is related to salmon procurement as evidenced both by the location of Chinlac on a salmon stream, and by the large

numbers of cache pits in the woods behind the site. Certainly, there are no other important resources available at the location in significant quantities. Moreover, the site is poorly situated for a winter habitation site and the house depressions face almost due north. I did not find evidence for a rectangular placement of posts in House III or for slanted poles, both of which indicate a traditional Carrier winter house as described by Morice. Instead, the floor plans show paired post holes which are a feature of the Carrier summer house.

I know of no artifacts or faunal remains which would, in themselves, indicate a winter occupation and there is nothing at Chinlac to support such a conclusion. Faunal remains are from animals which would normally be taken in the summer or fall and include bear, salmon, swan, beaver, and mussel. Bone and antler points, tentatively identified as parts of beaver or salmon spears were recovered, and the antler may indicate a fall occupation. Evidence of birchbark collection and the manufacture of birch bark vessels is present at the site and these activities were probably carried out in the summer.

The site was certainly occupied by a relatively large group of people at some time in the past. The artifact density and the structures are proof of a concentrated occupation and long duration. All evidence, including lithics, trade goods, and house configuration, indicates that the period of heaviest use was the protohistoric. In fact, the composition of the Euro-Canadian/Chinese artifact group

is characteristic of a protohistoric phase in the central interior. It is likely that a communal salmon weir was built nearby, and was probably under the control of 'deneza', the inhabitants copying the house styles, and perhaps other features of the culture of coastal peoples. At least 6 occupations are suggested by stratigraphy but conclusive statements are difficult to make. The fact that Euro-Canadian artifacts and projectile points have different distributions may indicate that the former represent a different occupation than the latter, or may indicate that a different activities took place in different areas of the house. There is little evidence to suggest great time depth for the site and Borden's estimate of 100 years of occupation is not unreasonable.

CHAPTER 8

THE ARCHAEOLOGICAL SURVEY

Introduction

In this chapter, I describe the results of an archaeological survey which was undertaken to test the hypotheses presented in the introduction of this thesis. I have postulated that settlement patterns at various periods should relate to the distribution and seasonality of important resources within the study area and I anticipated that archaeological sites would cluster at the confluence of the Stuart and Nechako Rivers, and at the outflow of Cluculz Creek on the north shore of Cluculz lake. In addition, I postulated changes based on differences in subsistence and trade patterns in the historic, protohistoric, and prehistoric periods and I expected to find relatively small sites in other locations on the rivers and lakes as predicted in the models describing settlement during these times. I have grouped sites according to location and have classified individual sites according to possible functional type. Remnants of aboriginal trails shown in Chapter 3 were located during the survey and I have mapped these.

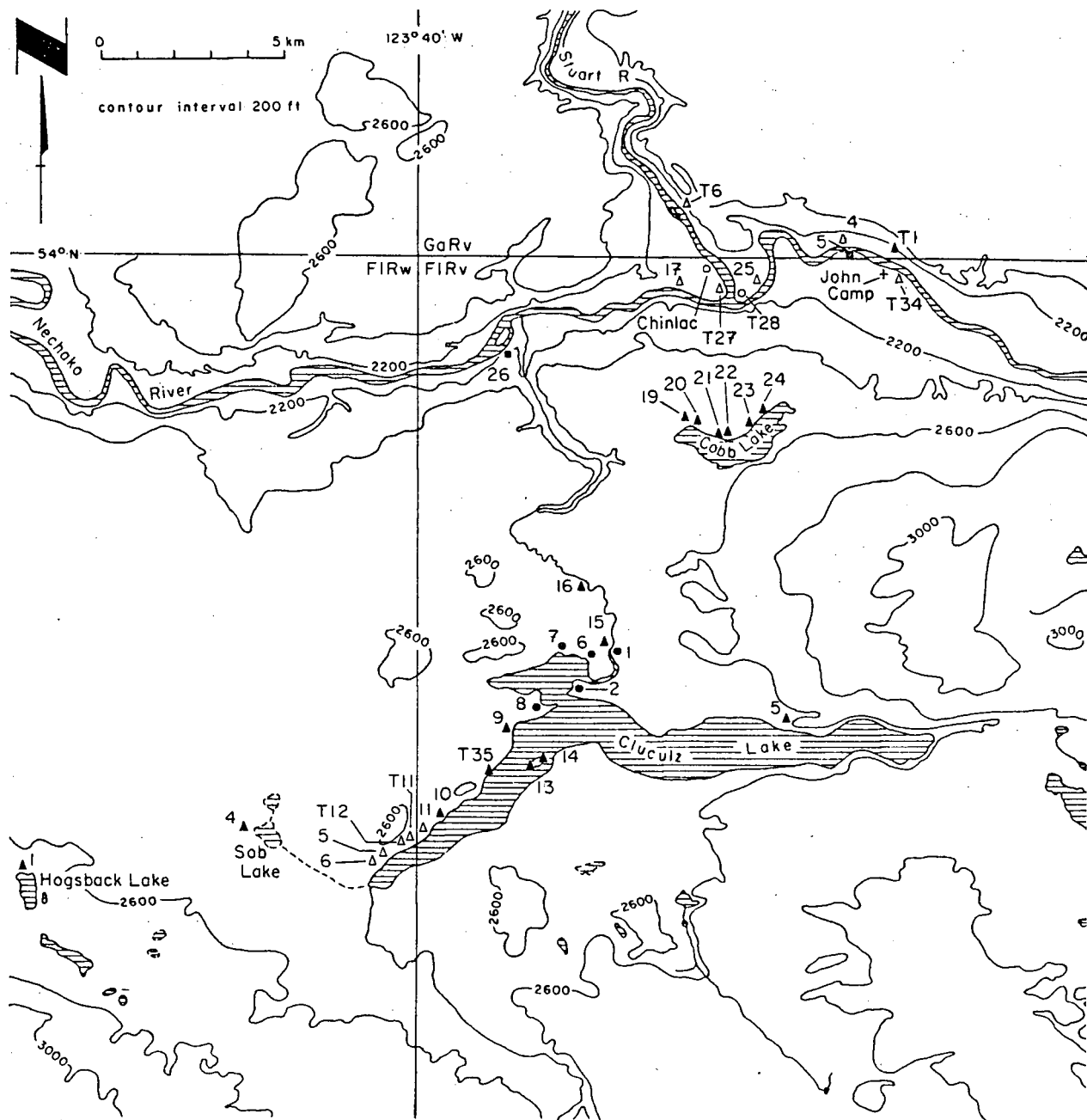
The Survey

The survey began July 9, 1984 and ended August 31, 1984. The crew consisted of 4 senior high school students under my supervision. The students, working in pairs, walked all the

shorelines described below and searched areas back from the water to 50 meters. Some promising locations further than 50 meters from the water were also investigated. A 14 foot boat with motor was used as transportation on the lakes and rivers enabling the crews to cover more area. In addition, some survey from the air and from horseback was carried out. Carrier elders and long-time white residents of the area were consulted at various times during the survey about the location of sites, and about the trails used by white pioneers and native peoples.

The crew surveyed both banks of the Nechako river from Hulatt (approximately 10 km west of the Nechako/Stuart confluence) to a point approximately 8 km down river from the confluence. Both banks of the Stuart River were searched to approximately 5 km north of the junction of the Stuart and Nechako. Both banks of Cluculz Creek were surveyed from the Lake to the Nechako. The entire shorelines of Cluculz and Cobb Lakes were searched by the crews and the area around Sob Lake was investigated. The crews walked areas where native trails were thought to have existed, and the shoreline of Hogsback Lake (to the west) was spot checked.

The survey produced results which seemed to provide support for the proposals made above. In all, 38 archaeological sites were found and recorded and almost half of them were near the outflow of Cluculz Lake (Figure 26). There were 6 sites, including Chinlac, on the Stuart River and 7 sites on the Nechako but few of these can be classified as actual



- | | |
|--|---|
| ○ village site, extended occupation, with cache pits;
Chinlac, FIRv T28 | ● village site, extended occupation, no cache pits;
FIRv 1, 2, 6, 7, 8 |
| △ small special purpose site, with cache pits;
FIRv 11, 17, 25, T27, T34, FIRw 5, 6, T11, T12
GaRv 4, T6 | ▲ small special purpose site, no cache pits;
FIRv 5, 9, 10, 13, 14, 15, 16, 19, 20, 21, 22,
23, 24, T35, FIRw 1, 4, GaRv T1 |
| + native fishing site, use in recent times;
John Camp | ■ rectangular cache pits, no habitation;
FIRv 26, GaRv 5 |

Figure 26. The Study Area Showing Type and Distribution of Archeological Sites Discovered During Survey.

habitation sites. There were 6 small sites on Cobb lake, one on Sob Lake, and one small site on Hogsback Lake. The largest sites in the area, and those having the deepest cultural deposits, are at the outflow of Cluculz lake and at the confluence of the Nechako and Stuart Rivers, but there are medium-sized sites (i.e. smaller than Chinlac) at the confluence also. I expected that large sites at the confluence of the Stuart and Nechako would be a feature of the protohistoric period and that relatively smaller sites at the confluence and on the rivers, and medium-sized sites at the outflow would be a feature of the late prehistoric period and, to some degree, of the early historic period also. In general, cultural deposits at sites in the study area are shallow and are nowhere more than 40 cm deep.

Site Groups and Functional Classification

Most sites could be assigned to four groups based on location and a few, which did not fit neatly into any of the four, constitute a fifth group. Given the distribution of resources, and archaeological and the ethnographic patterns described in previous chapters, the assumption is that the five groups reflect site function and resource procurement. Additional site data are given in Appendix 2.

1. Riverside Sites

This group included Chinlac and other sites along the banks of the Stuart and Nechako Rivers. Only two sites (GaRv 1)

and FlRv T28) show evidence of long term occupation and cache pits are the only feature present at many riverside sites. Probably most of these sites are connected with salmon fishing. In Chapter 3, I described how native people continue to fish for salmon on the Nechako.

GaRv 1- This is the Chinlac Village site described above. It is located at a place where a salmon weir could be built. Associated with the site are the more than 1800 cache pits which are situated just west of the clearing occupied by rectangular house depressions. The cache pits are on two low sandy ridges. Native informants told me that cache pits were usually dug into sandy soil near spruce trees, and that spots with heavy, or poorly-drained soil was not suitable. During the survey, several cache pits were investigated. No cultural material was noted in any but they were probably used for storage by the inhabitants of Chinlac, and probably by the people who lived at the smaller site right at the confluence (FlRvT28).

FlRv T28- This site is located on the east bank of the Stuart at its confluence with the Nechako. The most significant observable features of the site are 3 rectangular house impressions which are each approximately 10 by 7 meters in size (compared with 13 by 8 m for house depressions at Chinlac). Cultural deposits at the site are up to 30 cm deep and appear to be stratified (salmon vertebrae were noted in exposed habitation layers). The house impressions do not seem to be excavated as at Chinlac. There are only 7 cache pits at the site even though the inhabitants were certainly fishing for salmon at the location; the site is situated on a deep narrow channel where nets or traps (such as described in Chapter 3) might be used.

FlRv T27- This is a small site and has 2 possible cache pits, some scattered charcoal, fire-cracked rock, and the odd basalt flake. The site is on the top of the high, right bank of the Stuart at its confluence with the Nechako. Although the site does not seem ideally situated for salmon fishing, there is a deep eddy at the base of the river bank below the site, and nets or traps may have been used there.

GaRv T8- This is a cache pit site on the west bank of the Stuart about 300 meters north of GaRv 1. The site consists of 96 cache pits strung out in a line running roughly parallel to the river, approximately 100 meters from the bank. No other evidence of habitation was found. The site is near a gravel bar and a small island is sometimes exposed at low water. A weir or trap set-up could have been used here to catch salmon.

GaRv T6- A single cache pit was recorded at this location which is approximately 2 km up the Stuart from its confluence with the Nechako. There is a small island across the river from the site and a channel where a weir might have been used, although there is no evidence of any large scale use. It must be noted, however, that some places are not suitable for cache pits because the soil is too wet or heavy.

FlRv 25- The site is located on the north bank of the Nechako River approximately 800 meters east of the Stuart/Nechako confluence, at about 15 meters above river level. There are 6 cache pits present but no other evidence of habitation was noted. No shallows or other river feature were noted which might help account for the location of this site.

GaRv T1- This site was designated GaRvT1 because the original GaRv 1 (Chinlac) is not within the GaRv grid unit. The site is on top of the steep, north bank of the Nechako River approximately 4.5 km from the Stuart/Nechako confluence. Mary John's fish camp at D'no (Wedgewood) is directly across the river. The site is small and shallow.

GaRv 4- The site consists of 3 cache pits lying in a row on the north bank of the Nechako, approximately 3 km east of the Stuart/ Nechako confluence. There are no shallows or eddies nearby (at present) which might help explain the location of the site.

FlRv T34 - Approximately 4.5 km down river from the Stuart/Nechako confluence, the site consists of 3 shallow cache pits approximately 100 meters east of Mary John's fish camp.

GaRv 5- The site is located on the south, heavily-treed bank of the Nechako about 3 km from the confluence. It consists of a single, steep-sided, rectangular pit (2.5 m by 1.5 m by 1 m).

FlRv 17 - Consists of 21 cache pits situated on a raised bench 15 meters above the Nechako, on the north bank. The site is approximately 1000 meters west of the confluence. Below the site the river is deep and unrestricted.

FlRv 26- The features of this site are a rectangular cache pit (2 m by 1.5 m by 1 m) and 3 circular cache pits similar to those found elsewhere. The site is on the south bank of the Nechako about 2 km west of Finmoore.

2.Cluculz Lake Outflow Sites

There are 5 relatively large sites at the outflow of Cluculz Lake. It seems likely that cultural deposits at these sites were as deep as they are at Chinlac but, unfortunately, the area they occupy has been bulldozed for cottage foundations. Isolated pockets of deposit remain and local residents has found many artifacts in their gardens. The sites are ideally placed to take advantage of sucker, trout, and whitefish spawnings. At one (FlRv 1), the remains of fish traps have been found (in Cluculz Creek) which tends to confirm that the fish were harvested at the location as predicted in the models outlined above. All sites are on the north shore of the lake and have a southern exposure.

FlRv 1- The site is located on the east bank of Cluculz Creek less than 1000 meters from the lake. Unfortunately, the site area has been bulldozed and the cultural deposit scattered. When I first saw the site in 1982, two shallow rectangular depressions, 10 by 6 meters, were noted but one of these has since disappeared. Associated with the site are the remains of 3 fish traps which consist of stones piled across the stream (Plates 3, 4). In one case, there appears to be a collapsed superstructure of sticks and branches associated with the row of stones. According to Walter Gill, who worked for the Fish and Game Department in the 1940's, suckers were trapped in the creek in a control program; the survey found parts of the that trap.



Plate 3. The Remains of a Fish Weir on Cluculz Creek at FlRv 1.



Plate 4. The Remains of a Second Fish Weir on Cluculz Creek at FlRv 1.

FlRv 2- This large site is situated on the point at the outflow of the lake. The area has been bulldozed but where vestiges of the site remain (at the base of large trees, for example), cultural deposits are approximately 30 cm deep. Many artifacts have been collected here by local residents.

FlRv 6- The site is situated on the north shore of the lake, directly across from FlRv2. Land clearing has badly disturbed the cultural deposit but some vestiges are up to 10 cm deep.

FlRv 7- Fire-cracked rock, charcoal, and basalt flakes were found thinly scattered over an estimated area 1000 by 300 meters on the north shore of the lake. The site has been destroyed by land clearing but a single, small, rectangular pit (1 m by 1 m) was found in the eastern area of the site.

FlRv 8- The site occupies part of Norman point on the north shore of the lake across the bay from FlRv2. The site has been destroyed by cottage owners who have completely altered the surface with bulldozers. Artifacts from the site have been collected by local people and some are still found in gardens. Estimated area of the site prior to destruction is 600 by 300 meters.

FlRv 9 - This small site is situated on the north shore of Cluculz Lake approximately 1500 meters west of Norman Point. Flakes of basalt, fire-cracked rock, charcoal, and a few small pockets of intact cultural deposit were noted.

FlRv 12- The site, again on the north shore of the lake, is 500 meters east of FlRv 2. The site has been so badly disturbed that its existence is known only because cottage owners have found artifacts in their gardens.

FlRv T19- This small site is on the north shore of the lake about 2 km west of FlRv 8 and has been almost destroyed.

FlRv 15- Another small site is situated on the west bank of Cluculz creek about 1 km from FlRv 1. There is no intact cultural deposit but basalt flakes and other material were thinly scattered over the site area.

3. West End of Cluculz Lake Sites

There are 6 archaeological sites on the north shore of Cluculz Lake at the west end. Although Fisheries biologists in Prince George were uncertain which fish species might spawn at that end of the lake, it is possible that trout, suckers and burbot (Brenda Dixon, pers comm) used that location. There is a suggestion that native people fished during the spring for suckers or trout at that end of the lake, in later times (Hancock 1979: 20). Cultural deposits at the west-end sites are sparse, consisting mainly of scattered fire-cracked rock, some basalt chips and artifacts, and charcoal. There are a few cache pits in the area.

FlRv 10- The site is on the top of a slope on the north shore of the lake about 2000 meters from the west end. Land clearing operations have virtually destroyed the site, leaving cracked rock, charcoal, and lithics scattered over an area 45 by 20 meters.

FlRv 11- This site is similar to FlRv 10 and approximately 1500 meters from the west end of the lake. Basalt flakes and cracked rock were found thinly scattered over an area 50 by 40 meters; the site is much disturbed and cultural deposits were probably very shallow. There is a single circular cache pit on the site.

FlRw T11- Also badly disturbed because of bulldozing, the site is evident from cracked rock and basalt chips thinly scattered over an area 25 by 10 meters. Two shallow depressions nearby were tentatively identified as cache pits.

FlRw T12- Possibly a continuation of FlRw T11 the site is of similar size and characteristics. A cache pit was tentatively identified.

FlRw 5- The site is about 1000 meters from the west end of the lake on the north shore and is situated in an area which was, according to informants, used by pioneer families for open-air dances. The area has been bulldozed but basalt flakes, fire-cracked

rock and charcoal were thinly scattered over an area 150 by 50 meters. Several cache pits are at the site.

FlRw 6- This site is only a few meters from the end of the lake. A group of 6 circular cache pits was found.

4. Cobb Lake Sites

There are 6 small sites on the north shore of Cobb lake consisting of thin, surface scatters of fire-cracked rock, charcoal, and basalt flakes. These sites do not seem to be particularly close to any resource concentration but I have mentioned that the suckers and chub were caught in the lake by native people in recent times (Chapter 3). The sites are so similar in size and appearance that individual description seems unnecessary. The Cobb Lake sites are: FlRv 19 to 24 inclusive. At FlRv 24, some basalt flakes and a core were noted indicating probable manufacture of tools at the site. I suspect that Cobb lake would not be heavily fished by many people but perhaps the people of Chinlac visited the lake from time to time. It may also be that Cobb Lake was the property of a particular family group who periodically visited the lake. This might account for the small size of the archaeological sites. There are no cache pits at any of the sites.

5. Other Sites

Some sites were found which were outside the 4 locational clusters, or groups. This group is heterogeneous and several functional types are represented as I shall explain in the next section. I discuss them together here.

FlRv 5- This site was found 5 km east of FlRv 2; there are no other sites nearby. The water nearby is relatively deep and the char may spawn there (Brenda Dixon, pers comm). The site has been completely destroyed but several artifacts including a projectile point were picked up by a collector in a local garden.

FlRv 16- This small site is on the south bank of Cluculz Creek where I believe a trail crossed the stream. Some flakes of basalt and obsidian were noted on the surface.

FlRv 13, FlRv 14- Two small sites are on the north shore of a small island in Cluculz Lake just south of FlRv 8 (Norman Point). The sites are similar in size and appearance. I have mentioned the use of this island as a trapline camp by a Stoney Creek native in recent times. Char may spawn near the island (Brenda Dixon, pers comm).

FlRw 4- This small site is situated on a gravel ridge on the west shore of Sob lake. There is an oval-shaped small depression (2 m by 1 m by 1 m) on the site and this contains cracked rock and char-coal. A number of basalt flakes and a truncated projectile point were noted near the depression, and other basalt flakes and fire-cracked rocks were thinly scattered over the site. Sob Lake may contain no fish but it is a gathering place for large flocks of waterfowl.

FlRw 1- This is a small site on the north shore of Hogsback Lake. There are no cache pits but basalt flakes, fire-cracked rock, and some obsidian are thinly scattered on the surface. I do not know if whitefish occur in this lake but there are trout and suckers.

A Site Typology

The creation of a functional classification is an important step in the analysis of settlement and subsistence patterns. As Flannery states,

One of the first steps in the analysis of any settlement pattern is the development of a site typology, a classification that reflects the differences in size, function, features, and other attributes of sites dating to the same period (1976: 163).

In this case, the location of sites relative to resource distribution is an indication of function. The larger sites in the study area occur at two locations which are the places where resources are most abundant. Small sites are more problematical particularly as I have indicated that the changes in settlement would occur over time. As none of the sites has been dated, it is impossible to know where they belong in the scheme of things. I suggest that small sites may be explained in a number of ways, depending upon the time in which they were occupied.

1. The sites are satellites of the main villages at the outflow of the lake and special activities took place at each one during the protohistoric period.
2. The sites are evidence of small group use before and after the protohistoric period.
3. The sites are the remains of the camps of outsiders who came into the area from outside to exploit resources, or for some other purpose.

For convenience, all sites can be assigned to one of 3 general classes based on location. One class includes all river sites, one class includes lake sites, and one class includes creek and inland sites. Within the classes, sites are typed according to size, depth of deposit, and other features.

1. Class A - Riverside Sites

Type Aa- Large village site (with area 3000 sq m or more) situated on a major river preferably where a communal weir could be built. House styles reflect coastal influence and are large enough to accomodate several families or a kin group. If soil conditions permit, there will be cache pits nearby. Chinlac (GaRv 1) is of this type. Cultural deposit may be relatively deep.

Type Ab- Small village site (less than 3000 sq m in area). These sites may not be at places where communal weirs can be built but houses would be smaller reflecting use by small family groups. Since salmon procurement would be associated with the site, cache pits may be present, depending on soil type. Cultural deposit may be relatively deep. FlRv T28 is of this type.

Type Ac- Small special use sites covering a relatively small area and having shallow cultural deposits. Cache pits may be the only feature at these sites and all are probably associated with salmon fishing in some way. The rectangular pits present at some riverside sites may be Hudson's Bay Company caches (HBCA B.188/a/13 fo.36). Sites of this type include: FlRv 26, GaRv 5, GaRv 4, GaRv T1, FlRv T27, FlRv 18, FlRv 17, FlRv 1, FlRv 25, GaRv T28.

Class B- Lakeshore Sites

Type Ba- Large village sites (area greater than 3000 sq m) on the north shore of medium-sized lakes such as Cluculz Lake, near sucker, trout, and whitefish spawning areas, preferably near an outflow or tributary stream. Cultural deposits are relatively deep reflecting use by a large number of people over an extended period. Evidence of winter-style dwellings, as described in ethnographies, may be present. The sites FlRv 2, FlRv 7, FlRv 6, FlRv 1, and FlRv 8 are of this type. Fish traps may be present in streams nearby and, in fact, some sites of this type may be situated on a stream close to the lakeshore such as FlRv 1 .

Type Bb- Small lakeside special use sites (area is less than 3000 sq m) which were occupied for a specific reason as described above. The sites have shallow cultural deposits and are usually small. Some sites are on the shore of smaller lakes and some may have cache pits associated. The sites of this type are: FlRv 5, FlRv 9, FlRv 10, FlRv T19, FlRv 13, FlRv 14, FlRw 1, FlRw 4, FlRv 11, FlRw T11, FlRw T12, FlRw 5, FlRw 6.

Class C - Creek and Inland Sites

Type Ca- These would be small inland sites related to hunting or other activity. No inland sites away from water were found during survey.

Type Cb- These are stream side sites which cover an area less than 1000 sq meters and may have a fish trap feature associated. Cultural deposit is very shallow indicating that the site was not actually lived on for very long, or occupied by very many people. The users of the site were probably fishing for trout or suckers. FlRv 15 and FlRv 16 are of this type.

Aboriginal Trails

As stated earlier in this thesis, I anticipated that some sections of trails used by the Carrier in earlier times would be discovered by archaeological survey. These trails were used by the Carrier to travel to and from locations within the study area, particularly during the protohistoric period when I predict that the binary settlement system I proposed operated, and to other areas. Sections of trails were recovered by the survey and these closely matched the trails mapped by Morice (1978) and Dawson (1878) (Figure 15, page 63). Local residents and Carrier elders at Stoney Creek confirmed that these trails were part of the original system of communication in the region. Figure 27 shows the trails discovered by the survey. They are, for the most part, very clear and easy to follow.

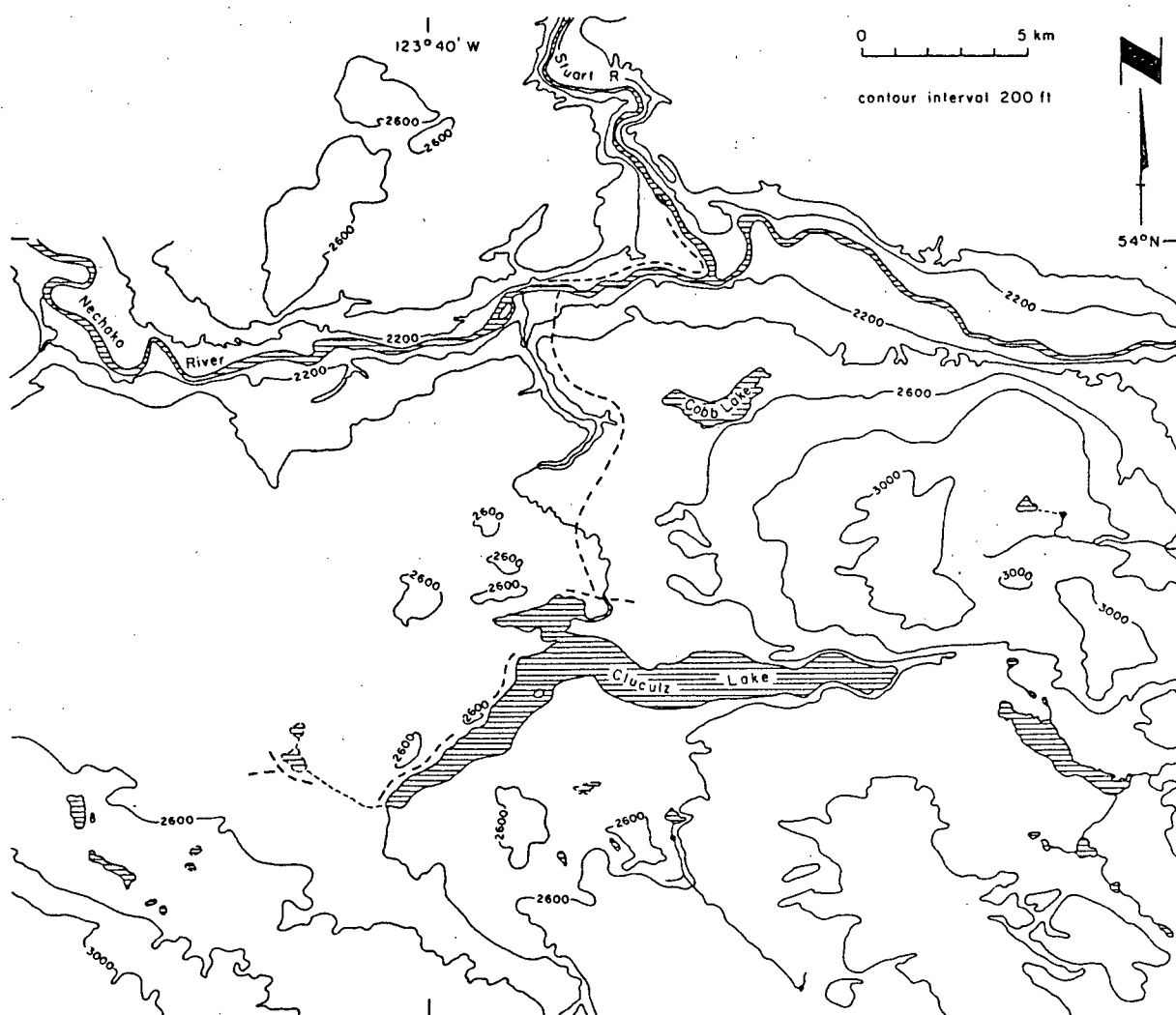


Figure 27. Portions of Aboriginal Trails Discovered by Archaeological Survey.

Summary

Although there is a variety of site types in the study area, it is probable that two closely connected subsystems are involved. Large sites are found in the two areas as predicted earlier in the thesis and tend to cluster near the places where resources are most plentiful at different times of the year. There is evidence of intensive use at the confluence of the Nechako and Stuart Rivers where salmon can be caught, and of a correspondingly heavy use of the area at the outflow of Cluculz Lake where suckers, trout, chub, and whitefish can be caught. The distribution of sites fits the model proposed for the protohistoric period. Also, the remains of trails which linked the elements of that system were located.

Smaller sites which were located by the survey tend to be situated at places where resources are not so abundant as they are where larger sites are found. I have suggested that this may be the result of several factors including the breakdown of kin group ownership in later times, and of the shift to family-based land use. I have also stated that smaller sites in some locations, particularly on the rivers, can be expected for prehistoric period. It is probable that larger habitation sites would have satellite special-use camps during the protohistoric period when, I suspect, there were more people in the study area. The location of cache pit sites may have more to do with soil type than resource avail-

ability. Sites at Cobb Lake are somewhat problematical given the resources available to the people but they were probably visited in the spring when suckers and chub spawn.

CHAPTER 9

SUMMARY AND CONCLUSION

Summary

I stated in the introduction to this thesis that a goal of my investigation was to locate and describe elements of settlement and subsistence systems I proposed for the study area. I set out to test the model of protohistoric Central Carrier society, with its historic and prehistoric variants based on ethnographic and historical evidence, against the archaeological data from C. Borden's Chinlac excavation and my site survey. An analysis of environmental factors which might effect settlement was a necessary step in this investigation, and I was led to the conclusion that important resources were available in greatest abundance at two separate locations at different times of the year. As I describe in Chapter 2, salmon can be harvested from July through September on the rivers, after which fishing is not a very productive activity on Cluculz Lake, whitefish are most easily caught in November and December and trout, suckers, and chub can be taken in large numbers in the spring and early summer at its outlet. Elsewhere on the lake, char can be caught in numbers in the fall, burbot can be caught in the spring, and other resources are also available. I predicted that the distribution of archaeological sites would be related to the distribution of resources and that the season of occupation

would match the season of maximum availability of the species present near the site. It was also clear that some sites were not well situated for occupation at certain times of the year and I made the point that Chinlac faces north and would be a poor place for a winter village.

There are several ethnographies available on the Carrier which provide information on Carrier resource exploitation techniques and on aspects of settlement. I reviewed this information in Chapter 3 where I listed resources used by the Carrier and the methods used to harvest these. In particular, I described the methods used in fishing at various locations. An important feature of Carrier life in earlier times was the 'deneza'- controlled kin group which owned resource locations and organised activities, and provided links with other groups in areas where salmon could be procured in lean years (Hudson 1983: 71). I also described the house styles that one might expect to find in use at certain times of the year and found that large rectangular houses were used at summer villages. Ethnographies and historical sources helped re-create the seasonal round and there were definite indications that salmon were not as overwhelmingly important as others had suggested. My own ethnographic research provided some information about subsistence activities in the area, and I found that the Stoney Creek Carrier had fished for salmon in the Nechako and for whitefish and suckers in Cluculz Lake in recent times, continuing, in a limited way, the reconstructed aboriginal pattern.

It was clear from the outset that changes had occurred in land use in the study area. The largest archaeological site, Chinlac, had been important at some time in the recent past but in historical times there was no evidence that the site had been regularly occupied by a large number of people. In fact, there were many indications that the study area itself was only sparsely inhabited when fur trade posts were established in New Caledonia. I concluded that population had declined near the end of the protohistoric period, and that some components of the settlement system which are situated where communal salmon weirs could be built, such as Chinlac, were virtually abandoned at that time in favour of locations where "small-group" technologies were more appropriate. In the protohistoric period, however, it may be that both population and organisation ('deneza'-controlled kin groups) favoured the communal weir site. At the same time, sites on the north shore of Cluculz lake were probably inhabited by many of the same people who had fished for salmon at Chinlac. They would choose to live near the outlet of the lake because fish are available there from November to June, and because the north shore has a good winter southern exposure. This is the basis for the binary system I proposed above and which is based largely on the distribution of resources in the area. Periodic shortages of fish, including salmon, necessitated a move to the west where local Carriers had kin ties. In my model for the protohistoric period (Chapter 5), I listed the attributes which help to identify sites from this time. Large

rectangular houses which would house a kin group were used during this period and relate to the social organisation described by Hudson (1972: 1983) and others.

In Chapter 4, I described settlement and subsistence activities for the study area during the historic period, and explained how the fur trade had directly and indirectly affected native systems. Essentially, the trade worked to undermine the clan groups and to replace these with a family-based socio-economic unit (Hudson 1983: 85). Also, other factors, such as disease, were destroying the population base needed for communal production methods (Hudson 1983: 99). Archaeologically, the historic period is represented, on salmon streams, by smaller sites with smaller features, reflecting the change in the mode of production. Houses were built to accomodate small family groups, and weirs were probably not used. Historic sites would also contain the typical period indicators such as gun parts, glass, ceramics, and European metalware. In the early part of the period, a small group of people would maintain the system developed in protohistoric times because both salmon and lake resources would be necessary for survival but very likely ceremonials and other such activities would become less and less a part of life in the area itself. There is no evidence that any important feast took place in the study area in historic times and it is possible that local people began to feel more a part of other groups such as the Sy-cuz people. In later times, resource locations became the property of the

Stoney Creek Carrier.

In Chapter 6, I discussed the late prehistoric period for the study area. Reconstructing settlement and subsistence during those times was less satisfactory because the period is difficult to distinguish from the protohistoric at many sites. However, if the protohistoric is the period when 'deneza' control over resources and communal weir fishing became important, then smaller sites are probable at earlier periods. Chinlac may not have been occupied until near the end of the late prehistoric period. Helmer (1975:77) proposes that the early Carrier socio-economic unit was the patrilineal band which, presumably, would be composed of 25-50 individuals. While there is no firm archaeological support for Helmer's proposition, some type of band remains a possibility.

Chapter 7 is a re-examination of the Chinlac Village site based on Borden's excavation. The site is situated on the Stuart where a weir could be built and the 10 large house depressions and the depth of the cultural deposit testify to the importance of the site. It is almost certain that the site was occupied during the protohistoric period when influences from the coast were strong. The site was probably inhabited during the salmon season in the summer and fall. Artifacts and other evidence suggest that the site was not used extensively during the historic period.

I was aware that archaeological survey might support my argument but that it was unlikely to prove anything

conclusively. Certainly, if sites were not found where I predicted then my models would have little merit. As I describe in Chapter 8, the survey did find sites which closely matched my expectations for the protohistoric period, although no sites could be firmly dated. Sites clustered near places where resources occurred in quantity at certain times of the year. A group of large sites was found at the outflow of Cluculz Lake where whitefish, trout, suckers, and chub can be caught, and Chinlac and other sites were found near the confluence of the Stuart and Nechako Rivers where salmon can be taken. A group of small, shallow sites were found at the west end of Cluculz lake and another group was found on the north shore of Cluculz Lake. Again, the largest and deepest sites are at the outflow and at the confluence.

Conclusion

In general, the findings of the investigation tended to confirm the predictions made in the introduction and elsewhere in the thesis but I am aware that other models may be developed which might explain equally well Carrier settlement and subsistence at various periods. I have judged Chinlac and the outflow sites equal in importance during the protohistoric period but I have not proven that this is the case. Rather, by demonstrating the existence of numerous outflow sites, I showed the feasibility of the model. It is very difficult to envision regular winter occupations at Chinlac but this must remain a possibility until more definite evidence on seasonality has been gathered.

I have indicated that small sites in the area are difficult to interpret at this time. Although there are resources which can be exploited from all the sites, it is still hard to integrate these into settlement patterns which existed at various periods, particularly as I have predicted that smaller sites would be a distinguishing feature of both the late prehistoric and the historic patterns. In most cases, however, small sites would be satellites of larger sites on the river or lake. Cache pits must be treated with some caution because they may appear in areas where the soil is suitable, and this may be some distance away from a resource exploitation location. Also, cache pits may not be found near the lake because the ground might be frozen when whitefish were harvested, or for some other reason such as the preservation method used for these fish.

Settlement in the study area underwent changes as a result of a variety of forces. One might speculate that in the early part of the late prehistoric period, coastal influence had not yet been felt in the central interior, and sites would be occupied by small bands. In the protohistoric period, coastal forms would be adopted and matrilineal kin groups would exist with 'deneza' controlling resources, establishing kin ties with western groups, acting to consolidate smaller bands, and facilitating group activities such as weir building. This would result in large village sites with large houses as at Chinlac. In later times, under the influence of the fur trade, the power of the 'deneza' would be

undermined and the village group would fragment into nuclear family-based socio-economic units. Smaller archaeological sites would result, and these would be situated where weirs would not normally be used (FlRv T28 is an example).

This investigation touched on a number of areas where further research is needed. Fishing with a communal weir has implications for social organisation which are worthy of further consideration. Additional work on the effects of coastal influence on the Carrier is worth pursuing so that a clear understanding of area cultural history and development can be realised. Also, prehistoric trade networks might be better understood if more archaeological and historical investigation is carried out. Relations between the Babine and the eastern Carrier should be researched and the nature of Carrier use of Babine resources in lean years should be studied. The latter is a very interesting feature of Carrier subsistence of which little is known.

It is still possible to gain settlement and subsistence information from Carrier elders who know much about land use in ancestral areas, but time is of the essence. Historical documents contain additional data on the Carrier, and may provide valuable insights into the past. Archival sources represent an enormous body of information, much of which has not been studied.

The whole of the central interior needs more archaeological study, and a firm regional chronology needs to be established. A site survey is only the first step toward a

more complete understanding of the archaeology of the area; selected sites in the area should be excavated as part of a continuing study. The predictions made in this thesis could be more thoroughly examined through excavation; some sites may contain evidence of earlier and later occupations than are present at Chinlac. The site FlRv T28 at the confluence of the Nechako and Stuart Rivers is a prime candidate. It is also important to find an intact lakeside site for excavation so that both components of the settlement pattern will be better understood.

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APPENDIX 1

Faunal Remains - Numbers of Identifiable Elements by Species Recovered By C.Borden at Chinlac (Cranny n.d.:26-27).

beaver (<u>Castor canadensis</u>)	37
deer (<u>Odocoileus hemionus hemionus</u>)	9
salmon (<u>Onchorynchus sp.</u>)	6
fresh water mussel (<u>Marqitafera sp.</u>)	6
trout (<u>Salmo gairdneri</u>)	3
porcupine (<u>Erethizon dorsatum</u>)	3
muskrat (<u>Ondatra zibethica</u>)	3
bear (<u>Ursus sp.</u>)	2
dog (<u>Canis familiaris</u>)	1
red squirrel (<u>Tamiasciurus hudsonicus</u>)	1
trumpeter swan (<u>Olor buccinator</u>)	1

Total Identifiable Elements 72

Faunal Remains - Numbers of unidentifiable elements by general type. Recovered by C.Borden from Chinlac (Cranny n.d.: 27).

small mammal (muskrat and smaller)	12
medium-size mammal (e.g. beaver)	167
large mammal (e.g. bear)	103
medium-size bird (e.g. duck)	1
small bird	3

Total unidentifiable elements 286

APPENDIX 2

Archaeological Site Data - Sites Recorded by Survey in 1984

Site Designation: FlRv 1

Location: Section Lot 946. UTMG IOU DQ E614 N724. Geographical Coordinates - 53°45'00"N. 123°35'00"W.

Site is located on the east bank of Cluculz Creek just off Jardine Rd, .5 km from Highway 16.

Drainage: Major - Nechako River. Minor - Cluculz Creek.

Elevation: 2500 feet ASL. 20 m above creek.

Vegetation on Site: trembling aspen, fireweed, grasses, lodgepole pine.

Site dimensions: 200 m x 140 m.

Condition of Site: badly disturbed by land clearing.

Cultural Matrix: charcoal, fire-cracked rock, flakes of basalt and other lithic material.

Depth of Cultural Matrix: mostly surface, 10-15 cm in house depression on site.

Non-cultural matrix: clay, sand, and gravel.

Comments: One rectangular house depression (10 m x 15 m) remains. There are the remains of 4 fish weirs associated with the site on Cluculz Creek.

Site Designation: FlRv 2

Location: Section Lot 1417. UTMG IOU DQ E603 N 715. GC 53°53'42"N , 123°36'08"W.

Site is located on the point at the east side of the outflow of Cluculz Lake.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 1.5 m above lake level.

Vegetation on Site: trembling aspen , lodgepole pine, wild rose, willow, grasses.

Site Dimensions: 600 m x 200 m est.

Condition of Site: Only 10 % intact. The site has been bulldozed for cottages. Cultural materials are scattered over the site area.

Cultural Matrix: fire-cracked rock , charcoal, basalt and other lithics.

Non - Cultural Matrix: gravel, sand, clay.

Comments: a few isolated pockets of intact cultural deposit to 30 cm deep remain. No cache pits or other features noted but many flakes of basalt were seen.

Site Designation: F1Rv 5

Location: Sec. Lot 4971. UTMG IOU DQ E658 N713. GC. 53° 53' 10" N, 123° 30' 50" W.

Site is located on the north shore of Cluculz Lake just off Tapping Rd.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 3 m above lake.

Vegetation on Site: lodge pole pine, spruce, wild rose, willow.

Site Dimensions: 13 m x 10 m.

Condition of Site: disturbed by gardening.

Cultural Matrix: fire-cracked rock, flakes of basalt, chert, and obsidian, charcoal.

Depth of C.M.: 20 cm max.

Comments: Artifacts have been collected in the garden area. No cache pits or other features were noted.

Site Designation: F1Rv 6

Location: Sec. Lot 946. UTMG IOU DQ E609 N 722. GC 53° 54' 00" N, 123° 35' 25" W.

Site is on the north shore of Cluculz Lake at the outflow.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 4 m above lake.

Vegetation: willow, saskatoon berry, soapberry, raspberry, trembling aspen, spruce, lodgepole pine.

Site Dimensions: 150 x 70 m.

Condition of Site: badly disturbed by land clearing.

Cultural Matrix: burnt earth, fire-cracked rock, flakes of basalt and other lithics to a depth of 10 cm.

Non - Cultural Matrix: sand, gravel, clay.

Comments: artifacts were noted scattered over the area.

Site Designation: F1Rv 7

Location: Sec. Lot 945. UTMG IOU DQ E600 N728. GC 53° 54' 20" N, 123° 36' 40" W.

Site is located on the north shore of the bay at the outflow of Cluculz Lake.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 5 m above lake.

Vegetation: willow, wild rose, saskatoon berry, soapberry, trembling aspen, spruce, pine, grasses.

Site Dimensions: 1000 m x 800 m.

Site Condition: largely destroyed.

Cultural Matrix: fire-cracked rock, charcoal, basalt flakes scattered over the site area.

Depth of C.M.: surface.

Non-cultural Matrix: clay, sand.

Comments: Cultural debris is scattered over a large area but no intact deposit was noted. A rectangular pit 2 x 1.5 x 1 m was noted.

Site Designation: FlRv 8

Location: Sec. Lot 1142. UTMG IOU DQ E597 N712. GC 53° 53' 30" N, 123° 37' 00" W.

Site is located on the north shore of Cluculz Lake on Norman Point near the outflow of the lake.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 5 m above the lake.

Vegetation: trembling aspen, willow, alder, lawn and other grasses.

Site Dimensions: 800 x 500 m est.

Site Condition: most of the site is under garden or fill. little is intact.

Cultural Matrix: many artifacts have been recovered by residents over the years; fire-cracked rock, charcoal, ash.

Depth of C.M. : to 20 cm.

Non-cultural Matrix: sand, gravel, clay.

Comments: apparently a large and rich site at one time, the area it sits on has been completely altered by the modern residents.

Site Designation: FlRv 9

Location: Sec Lot 1139. UTMG IOU DQ E587 N704. GC 53° 52' 55" N, 123° 37' 40" W.

The site is located on the north shore of Cluculz Lake off Meier Rd.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 3 m above lake.

Vegetation: trembling, aspen, alder, lodgepole pine, douglas fir, wild rose, juniper.

Site Dimensions: 40 m x 20 m.

Site Condition: virtually destroyed except for scattered cultural material.

Cultural Matrix: ash, basalt flakes, fire-cracked rock

Depth of C.M.: surface scatter.

Non-cultural Matrix: gravel, sand, clay.

Comments: badly disturbed, no cache pits.

Site Designation: FlRv 10

Location: Sec Lot 1145. UTMG IOU DQ E697 N581. GC 53° 52' 55" N, 123° 38' 10" W.

On the north shore of the lake approx. 3 km from the west end.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 5 m above lake.

Vegetation: trembling aspen, lodgepole pine, willow, saskatoon berry.

Site Dimensions: 40 m x 20 m.

Site Condition: cat work has scattered cultural materials. No intact deposits.

Cultural Matrix: ash, charcoal, cracked rock, flakes of basalt, chert, obsidian, other artifacts.

Non-cultural Matrix: clay, sand.

Comments: badly disturbed, materials scattered.

Site Designation: FlRv 11

Location: Sec Lot 1135. UTMG IOU DQ E578 N689. GC 53° 52' 00" N , 123° 38' 30" W.

On the north shore of Cluculz Lake approximately 2.2 km from the west end.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 5 m above lake.

Vegetation: trembling aspen, nettle, spruce, birch, soapberry, grasses.

Site Dimensions: 50 m x 40 m.

Site Condition: somewhat disturbed by land clearing but 90 % intact, cultural materials are lightly scattered over the site area.

Cultural Matrix: fire-cracked rock, basalt flakes, charcoal.

Depth of C.M.: surface.

Non-cultural Matrix: clay, sand, gravel.

Comments: a single small (1 m x 1 m x 1 m) cache pit is associated with the site.

Site Designation: FlRv 12

Location: Sec Lot 1417. UTMG IOU DQ E613 N714. GC 53° 53' 40" N, 123° 35' 20" W.

On the north shore of Cluculz Lake approx. 1 km east of FlRv 2.

Drainage: Cluculz Creek, Nechako River.

Elevation: 2500 feet ASL. 12 m above lake.

Vegetation: trembling aspen, spruce, willow, wild rose, grasses.

Site Dimensions: 25 m x 40 m est.

Site Condition: no longer intact.

Cultural Matrix: Fire-cracked rock, lithics.

Depth of C.M.: unknown.

Non-cultural Matrix: sandy clay and gravel.

Comments: site is known from occasional basalt flakes and cracked rock noted in garden area, and because artifacts were recovered by residents.

Site Designation: FlRv 13

Location: Sec Lot 8902. UTMG IOU DQ E593 N696. GC 53° 52' 30" N, 123° 37' 10" W.

On the north shore of an island in Cluculz Lake, SW of the outflow of the lake.

Elevation: 2500 feet ASL. 20 m above lake.

Vegetation: aspen, spruce, Douglas fir, soapberry, grasses.

Site Dimensions: 10 m x 10 m.

Site Condition: good.

Cultural Matrix: a surface scatter of numerous basalt flakes.

Non-cultural Matrix: coarse sand and gravel

Comments: basalt flakes average 2 cm across, and 2-5 cm thick.

Site Designation: FlRv 14

Location: Sec Lot 8902. UTMG IOU DQ E595 N697. GC 53° 52' 31" N, 123° 36' 55" W.

On eastern end of the island occupied also by FlRv 13.

Elevation: 2500 feet ASL. 20 m above lake on a slope.

Vegetation: as FlRv 13.

Site Dimensions: 10 m x 13 m.

Site Condition: badly disturbed, raked often by residents.

Cultural Matrix: basalt flakes and chips scattered on the surface.

Non-cultural Matrix: clay, sand, gravel.

Comments: similar to FlRv 13.

Site Designation: FlRv 15

Location: Sec Lot 946. UTMG IOU DQ E613 N730. GC 54° 54' 15" N, 123° 35' 15" W.

On the west bank of Cluculz Creek 1.8 km from the outflow of the lake.

Elevation: 2500 feet ASL. 7 m above the creek

Vegetation: willow, grasses.

Site Dimensions: 40 m x 15 m.

Site Condition: uncertain - Cultural matrix consists of several basalt flakes were scattered over surface of site area.

Non-cultural Matrix: clay, sand, gravel.

Comments: very little cultural material present.

Site Designation: FlRv 16

Location: Sec Lot 944. UTMG IOU DQ E604 N748. GC 53° 55' 20" N, 123° 36' 10" W.

On the west bank of Cluculz Creek approx. 2 km from the outflow of the lake.

Elevation: 2500 feet ASL. 15 m above creek.

Vegetation: willow, trembling aspen, grasses, spruce.

Site Dimensions: 20 m x 10 m.

Site Condition: uncertain, only a few basalt and chert flakes were found on site.

Non-cultural Matrix: sand, gravel, clay.

Comments: very little on site.

Site Designation: FlRv 17

Location: Sec Lot 826. UTMG IOU DQ E632 N835. GC 53° 59' 30" N, 123° 33' 35" W.

Site is on the Nechako River approx. 2 km west of its confluence with the Stuart.

Elevation: 2500 feet ASL. 15 m above river level

Vegetation: trembling aspen, spruce, Douglas fir, juniper, labrador tea, birch.

Site Dimensions: 50 m x 100 m.

Site Condition: good - site consists of 21 small circular cache pits (1 m x 1 m x 1 m) only.

Non-cultural matrix: sandy soil.

Comments: no other cultural material noted.

Site Designation: FlRv 19

Location: Sec Lot 6455. UTMG IOU DQ E644 N789. GC 53° 57' 40" N, 123° 33' 20" W.

Site is at the west end of Cobb Lake on the north shore.

Elevation: 2500 feet ASL. 2 m above lake.

Vegetation: lodgepole pine, spruce, red osier dogwood, willow.

Site Dimensions: 10 m x 10 m.

Site condition: apparently intact.

Cultural matrix: basalt flakes, charcoal, fire-cracked rock scattered on the surface.

Non-cultural matrix: forest duff, sand, gravel.

Comments: a small site with no cache pits.

Site Designation: FlRv 20

Location: Sec Lot 6455. UTMG IOU DQ E637 N787. GC 53° 57' 40" N, 123° 33' 15" W.

Site is on ~~the north~~ shore of Cobb Lake at the west end.

Elevation: 2500 feet ASL. 2 m above lake.

Vegetation: as FlRv 19.

Site Dimensions: 20 m x 15 m.

Site Condition: mostly intact.

Cultural Matrix: fire-cracked rock, charcoal, flakes of basalt and obsidian scattered on the surface.

Non-cultural Matrix: as FlRv 20.

Comments: a small site with no cache pits.

Site Designation: FlRv 21

Location: Sec Lot 4565. UTMG IOU DQ E644 N785. GC 53° 57' 17" N, 123° 32' 50" W.

On the north shore of Cobb Lake, approx. 1 km from the west end.

Elevation: 2500 feet ASL. 2 m above lake.

Vegetation: as FlRv 19.

Site Dimensions: 20 m x 15 m.

Site Condition: virtually intact.

Cultural Matrix: lithic scatter, fire broken rock, charcoal is scattered on the surface.

Non-cultural matrix: as FlRv 19.

Comments: a small site with no cache pits or other features.

Site Designation: FlRv 22

Location: Sec Lot 4565. UTMG IOU DQ E648 N784. GC 53° 57' 20" N, 123° 32' 18" W.

On the north shore of Cobb Lake 1.5 km from the west end.

Elevation: 2500 feet ASL. 2 m above lake.

Vegetation : as FlRv 19.

Site Dimensions: 10 m x 15 m.

Site Condition: intact.

Cultural Matrix: a surface scatter of basalt flakes.

Non-cultural Matrix: as FlRv 19.

Comments: no cache pits or other features.

Site Designation: FlRv 23

Location: Sec Lot 4565. UTMG IOU DQ E651 N786. GC 53° 57' 40" N, 123° 32' 00" W.

On the north shore of Cobb Lake approx. 1.7 km from the west end.

Elevation: 2500 feet ASL. 3 m above Cobb Lake.

Vegetation: as FlRv 19.

Site Dimensions: 15 m x 10 m.

Site Condition: 50 % intact.

Cultural Matrix: a surface scatter of fire-cracked rock, charcoal, basalt flakes.

Comments: no cache pits or other features.

Site Designation: FlRv 24

Site Location: Sec Lot 4565. UTMG IOU DQ E653 N790. GC 53° 57' 50" N, 123° 31' 40" W.

On the north shore of Cobb Lake approx. 700 m from the east end.

Elevation: 2500 feet ASL. 1 m above lake.

Vegetation: as FlRv 19.

Site Dimensions: 5 m x 5 m.

Site Condition: badly eroded by lake action.

Cultural Matrix: a surface scatter of basalt flakes and fire-cracked rocks.

Comments: no cache pits or other features.

Site Designation: FlRv 25

Site Location: Sec Lot 830. UTMG IOU DQ E654 N826. GC 53° 59' 38" N, 123° 31' 40" W.

On the north bank of the Nechako River approx. .8 km east of the confluence.

Elevation: 2100 feet ASL. 20 m above the river.

Vegetation: trembling aspen, spruce, lodgepole pine, birch, willow, juniper.

Site Dimensions: 20 m x 65 m est.

Site Condition: good.

Cultural Matrix: site consists of 6 small circular cache pits on a high sandy river bank.

Site Designation: FlRv 26

Site Location: Sec Lot 1178. UTMG IOU DQ E580 N807. GC 53° 58' 35" N, 123° 38' 20" W.

On the south bank of the Nechako River approx. 2.5 km west of Finmoore.

Elevation: 2100 feet ASL. 15 m above the river.

Vegetation: cottonwood, willow, alder, spruce, lodgepole pine.

Site Dimensions: 40 m x 20 m.

Comments: site consists of a rectangular cache pit (2m x 1 1/2m) and 3 small (1m x 1m) circular cache pits in a line. No other cultural materials were noted.

Site Designation: FlRv T27

Site Location: Sec Lot 826. UTMG IOU DQ E645 N824. GC 53° 59' 20"N, 123° 32' 30"W.

At the confluence of the Stuart and Nechako Rivers.

Elevation: 2100 feet ASL. 25 m above river.

Vegetation: trembling aspen, spruce, lodgepole pine, grasses.

Site Dimensions: 10 m x 20 m.

Comments: site consists of a thin surface scatter of charcoal with some fire-cracked rock. A few basalt flakes were noted. There are two small, possible cache pits. Soil is sandy with gravel.

Site Designation: FlRv T28

Site Location: Sec Lot 830. UTMG IOU DQ E648 N821 . GC 53° 59' 15"N, 123° 32' 10"W.

At the confluence of the Stuart and Nechako Rivers.

Elevation: 2100 feet ASL. 10 m above river.

Vegetation: trembling aspen, spruce, pine, wild rose, nettle, grasses.

Site Dimensions: 110 m x 80 m.

Site Condition: very good, very little disturbance.

Cultural Matrix: fire-cracked rock, charcoal, artifacts, etc to a depth of 30 cm.

Non-cultural Matrix: clay, sand, gravel.

Comments: There are 3 rectangular house impressions (av. size 10 m x 7 m)and several small circular cache pits on the site.

Site Designation: FlRv T34.

Site Location: Sec Lot 4546. UTMG IOU DQ E694 N829. GC 53° 59' 49"N, 123° 27' 46"W.

On the south bank of the Nechako River approx. 4.5 km downriver from the confluence of the Nechako and Stuart Rivers.

Elevation: 2100 feet ASL. 30 m above river.

Vegetation: alder, spruce, lodgepole pine, birch.

Site Dimensions: 8 m x 10 m.

Comments: Site consists of 3 shallow cache pits.

Site Designation: Chinlac (Designated GaRv 1 by C. Borden)

Site Location: Sec Lot 826. UTMG IOU DQ E641 N830. GC 53° 59' 50"N, 123° 32' 55"W.

On the west bank of the Stuart River approximately 1 km from the confluence.

Elevation: 2100 feet ASL. 30 m above the river.

Vegetation on Site: grasses, juniper, lodgepole pine, spruce, labrador tea, saskatoon berry.

Site Dimensions: the site is best divided into 2 parts. The habitation site 300 m x 200 m, and the cache pit field which is approx. 200 m x 1000 m in size.

Comments: See Chapter 7 in this thesis.

Site Designation: GaRv 1

Site Location: Sec Lot 832. UTMG IOU DQ E695 N835. GC 54° 00' 01" N, 123° 27' 45" W.

On the north bank of the Nechako River, near a log cabin, about 3 km east of the confluence.

Elevation: 2100 feet ASL. 20 m above the river.

Vegetation on Site: aspen, spruce, pine, juniper, raspberry, wild rose.

Site Dimensions: 20 m x 10 m.

Condition of Site: 50 % intact.

Comments: A shallow (< 5 cm) deposit of fire-cracked rock, charcoal, and artifacts covered with forest duff, on sandy, gravelly soil. No cache pits.

Site Designation: GaRv 4

Location: Sec Lot 832. UTMG IOU DQ E685 N839. GC 54° 00' 20" N, 123° 29' 10" W.

On the north bank of the Nechako about 2 km west of the confluence with the Stuart.

Elevation: 2100 feet ASL. 10 m above the river.

Vegetation: willow, grasses, alder, wild rose.

Dimensions: 7 m x 3 m.

Comments: 3 small (1m x 1m x 1m) circular cache pits in a row on the river bank, in sandy soil.

Site Designation: GaRv 5

Location: Sec Lot 912. UTMG IOU DQ E684 N838. GC 54° 00' 10" N, 123° 30' 00" W.

On the south bank of the Nechako River about 2 km from the confluence.

Elevation: 2100 feet ASL. 10 m above river.

Vegetation: spruce, pine, cottonwood, wild rose.

Comments: site consists of a single rectangular cache pit in sandy soil. The pit is 1 1/2 m x 2 1/2 m x 1 m deep and is hidden in the trees.

Site Designation: GaRv T6

Location: Sec Lot 5427. UTMG IOU DQ E632 N848. GC 54° 00' 50" N, 123° 33' 40" W.

On the east bank of the Stuart River approximately 2 km north of Chinlac.

Elevation: 2100 feet ASL. 10 m above river level.

Vegetation: aspen, pine, raspberry, kinnikinnick, grasses.

Comments: site consists of a single small circular cache pit (1m x 1m x 1m) on a sandy bench near the river.

Site Designation: GaRv T8

Location: Sec Lot 826. UTMG IOU DQ E637 N837. GC 54°00' 10" N, 123°33' 10" W.

On the west bank of the Stuart about 1500 m from the confluence with the Nechako.

Elevation: 2100 feet ASL. 10 m above the river.

Vegetation: aspen, pine, wild rose, willow, red osier dogwood.

Comments: the site consists of a group of 96 circular cache pits dug into a sandy gravelly soil, and covering an area of 200 m x 50 m along the river bank.

Site Designation: FlRw 1

Location: Tp 10 Cariboo District Range 4. UTMG IOU DQ E455 N688. GC 53°50'55"N, 123°50'00"W.

At the north end of Hogsback Lake.

Elevation: 2600 feet ASL. 2 m above the lake.

Vegetation: pine spruce, aspen, willow, labrador tea.

Site Size: est. 30 m x 10 m.

Comments: a surface scatter of fire-cracked rock, charcoal, some basalt and obsidian flakes, on sandy, gravelly soil.

Site Designation: FlRw 4

Location: Sec Lot 1167. UTMG IOU DQ E454 N678. GC 53°51' 35" N, 123°44' 05" W.

On the west side of Sob Lake.

Elevation: 2500 feet ASL. 100 m above the lake.

Vegetation: saskatoon berry, pine, aspen, spruce.

Site Size: 40 m x 10 m.

Comments: site is on a ridge above the lake and features an oval shaped depression (2m x 3m x 1 1/2 m deep), fire-cracked rock, charcoal , and lithics of basalt and obsidian.

Site Designation: FlRw 5

Location: Sec lot 1169. UTMG IOU DQ E551 N670. GC 53°51' 00" N, 123°40' 55" W.

On the north shore of Cluculz Lake about 500 m from the west end.

Elevation: 2500 feet ASL. 10 m above the lake.

Vegetation: lodgepole pine, trembling aspen, spruce, wild rose.

Site Size: 25 m x 15 m.

Comments: site is a surface scatter of fire-cracked rock, charcoal, and basalt flakes, on gravel and sandy clay. No cache pits noted.

Site Designation: FlRw 6

Location: Sec Lot 1169. UTMG IOU DQ E549 N668. GC 53° 50' 55"N, 123° 41' 00"W.

On the north shore of Cluculz Lake about 600 m from the west end.

Elevation: 2500 feet ASL. 20 m above the lake.

Vegetation: as FlRw 5.

Site Size: est. 100 m x 50m.

Comments: the site consists of six shallow (presently 1 m deep) small circular cache pits in sandy soil (to 2 m in diameter).

Site Designation: FlRw T11

Location: Sec Lot 1134. UTMG IOU DQ E555 N674. GC 53° 51' 35"N, 123° 40' 30"W.

On the north shore of Cluculz Lake about 1.5 km from the west end.

Elevation: 2500 feet ASL. 20 m above lake level.

Vegetation: as FlRw 5.

Site Size: 30 x 50 m est.

Comments: site is badly disturbed by a bulldozer and fire-cracked rock, charcoal, and basalt flakes are thinly scattered over the site area.

Site Designation: FlRw T12

Location: Sec Lot 1134. UTMG IOU DQ E556 N675. GC 53° 51' 35"N, 123° 40' 35"W.

On the north shore of Cluculz lake approximately 1.6 km from the west end.

Elevation: as FlRw T11.

Vegetation: as FlRw 5.

Site Size: 10 m x 20 m.

Comments: the site may be connected to FlRw T11. Fire-cracked rock, charcoal, and basalt flakes have been scattered over the surface by a bulldozer.