

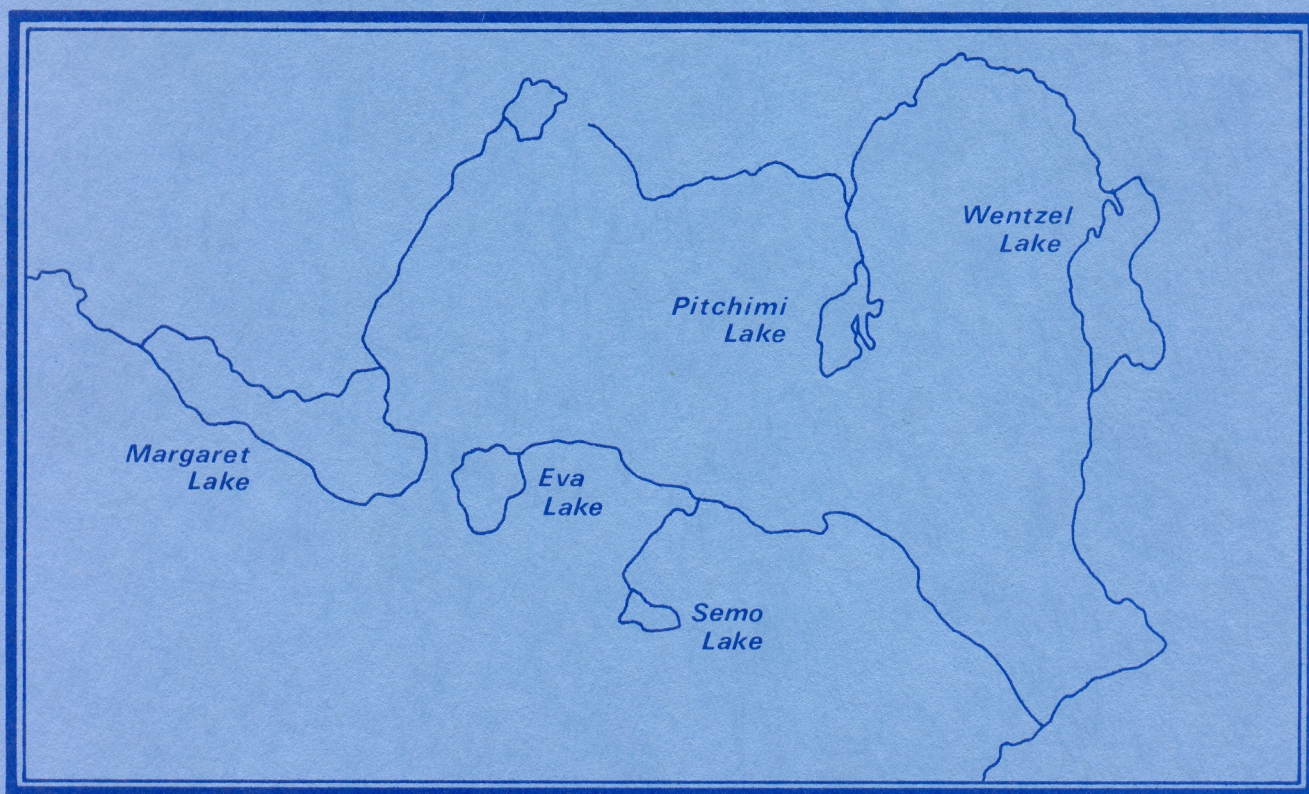
ARCHAEOLOGICAL  
SURVEY  
OF  
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Occasional Paper  
No. 2

1976

RESEARCH  
IN  
NORTHERN  
ALBERTA  
1975

Paul F. Donahue



Alberta

CULTURE  
Historical Resources

ARCHAEOLOGICAL RESEARCH  
IN NORTHERN ALBERTA  
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## OCCASIONAL PAPERS

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## OBJECTIVES

These Occasional Papers are designed to permit the rapid dissemination of information resulting from Historical Resource programmes. They are intended primarily for interested specialists, rather than as popular publications for general readers. In the interests of making information available quickly to these specialists, normal publication procedures have been abbreviated.

## ABSTRACT

An archaeological survey of the Caribou and Birch Mountains and portions of the Peace, Athabasca and Clearwater Rivers in northern Alberta was directed at inventorying sites and assessing whether or not differential occupation of two ecologically dissimilar uplands had occurred. Greater usage of the Birch than the Caribou Mountains upland was evidenced by the more extensive and more densely distributed sites on the Birch Mountains. Differential use of lakes on the uplands was also recorded and possible explanations are offered for it.

## ACKNOWLEDGEMENTS

I wish to thank Dr. W. Byrne, Director of the Archaeological Survey of Alberta, for providing me with the opportunity to undertake an archaeological research contract for the survey. The crew: Robert Ferguson, John Ives and Richard Primeau did an excellent job under less than ideal conditions, and I promise them future crews will have more food. I also want to thank Wesley Zwicker for cataloguing the artifacts and calculating the site distribution data. My gratitude also includes the many residents of Ft. Vermilion and Ft. Mackay and the surrounding areas who made our field season so much more enjoyable and rewarding. Finally, I want to thank John Ives and Gary Forma for their constructive comments.

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## ADDENDUM

The single obsidian flake from IgPq - 4 on Pitchimi Lake was derived from the Mr. Edziza volcanic complex--probably flow number 3--in northwestern British Columbia. Source determination was accomplished through the courtesy of Erle Nelson (Simon Fraser University).

## INTRODUCTION

The Caribou Mountains, Peace River near Ft. Vermilion, the Birch Mountains and portions of the Clearwater and Athabasca Rivers east and north, respectively, of Ft. McMurray were surveyed to obtain prehistoric and historic baseline data. So little previous archaeological research has been undertaken in northern Alberta we decided to survey quickly large regions rather than focus on more detailed studies of smaller localities. A research problem and methodology adopted to the survey region were directed at ascertaining whether or not differential utilization of the Caribou and Birch Mountain uplands had occurred. The Birch Mountains offer a more pleasant environment than do the Caribou Mountains because of lower altitude and more southerly location. Confirming differential utilization depended on recording a greater number of sites, preferably larger and extending over longer temporal periods, and more densely distributed in one upland than the other. Portions of the Peace, Clearwater and Athabasca were surveyed under the same terms of reference. A transect up the Caribou Mountains south slope was undertaken to record and test terraces for prehistoric occupations along proglacial lake shores (Figure 1).

## METHOD

Survey techniques were straight forward. We flew to a lake or drove to a river and either walked or canoed the shoreline, rarely losing sight of it. All likely looking places, as determined by physiography and/or vegetation, were surface surveyed and trowel tested, excavating as few as 2 or as many as 72 pits between  $.25 \text{ m}^2$  and  $1 \text{ m}^2$ . Each place surveyed was designated a stop (located on maps as an open square within a square). If any non-recent cultural material was recovered, the stop was recorded as a site (located on maps as a black square within a square) and

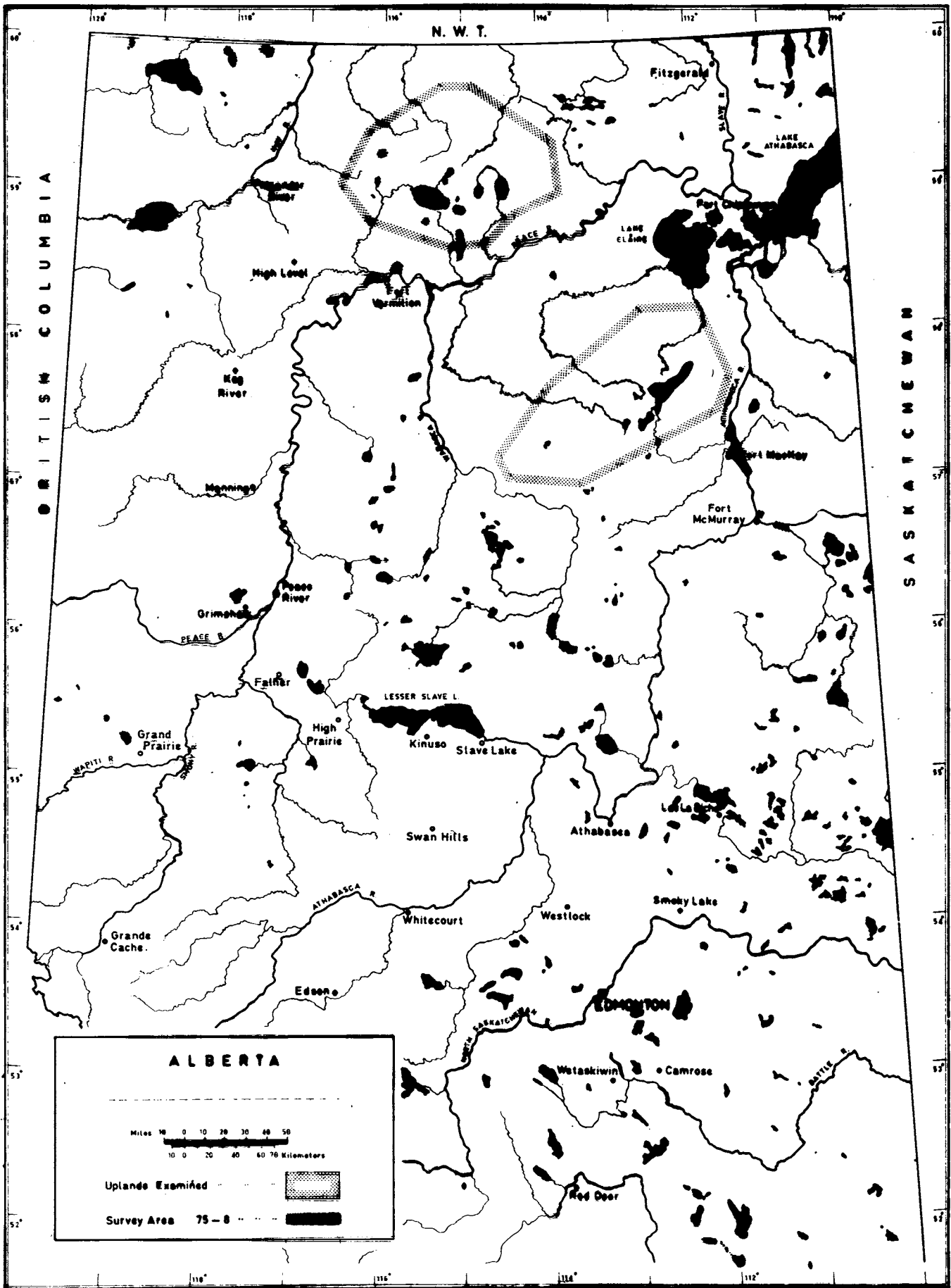


Figure 1

assigned a Borden number. Emphasis was placed on quickly ascertaining the temporal and spatial parameters of each site and, consequently, even relatively productive ones were not sampled any more than was minimally necessary. This approach often proved frustrating.

Approximately the same number of man-days were spent surveying each of the uplands. Sampling is thought to have been consistent in that we did or did not stop for similar reasons in all areas. However, I should point out that our assessment of site location might have improved through the summer, that canoeing on the Birch Mountains rather than walking may somehow have improved our chances of finding sites, and that the more penetrable Birch Mountain vegetation offered easier going. Site location information is discussed in detail in the Site Distribution section.

## ENVIRONMENTS

Both uplands are plateau remnants underlain by Upper Cretaceous marine deposits of dark grey shale. Areas between them and other uplands such as the Buffalo Head, Clear and Saddle hills were downcut by the Peace and Athabasca rivers and their tributaries. Approximately 35,000 years ago, at the onset of the Wisconsin glacial period, two massive 5,000 foot thick ice sheets moved southward and eastward until virtually the entire province was ice covered (Hardy 1967:50). About 11,000 years ago the ice sheet was retreating. Glacial mass wasting in the uplands resulted in extensive till deposits and a hummocky morainal topography. A radiocarbon date of  $8600 \pm 100$  B.P. (S-116) (McCallum and Wittenberg 1962:71) obtained on peat in contact with till on the Caribou Mountains denotes both when modern vegetation began to grow and the earliest post-glacial period that persons could occupy the plateau. Occupation of the slopes however, may have been

slowed by extensive proglacial lakes that created islands of the uplands. The lakes, created by massive melting associated with increasing elevations to the west and the retreating ice sheet to the east, reached a maximum of 518 m above present day sea level as evidenced by silt and clay sedimentary deposits and terraces along upland slopes (Cameron 1922, Taylor 1960).

#### CARIBOU MOUNTAINS

Rowe (1972) classifies the Caribou Mountains forest cover as Lower Foothills (B.19a), characterized by a forest transitional between the Boreal and Subalpine forests. Dominant tree species are lodgepole pine, tremblaine aspen and balsam poplar. In older stands, white spruce is important and black spruce frequently occurs. White birch and tamarack are scattered on well-drained and poorly-drained land respectively. Muskeg covers fully 30% of the upland and much of the poorly drained area is underlain by permafrost. Topography is rolling with some small plateaus among the low rounded hills. Maximum elevations range from about 823 m to 975 m a.m.s.l.

The Caribou Mountains are subject to long cold winters, short summers of 60 frost free days, a mean annual temperature range of 21.1<sup>0</sup> C (70<sup>0</sup>F) and a mean annual precipitation of 450 mm (18") (Atlas of Alberta 1969). Soils on the upland are considered a grey wooded organic. This group occurs in areas with a sub-humid climate and continuous forest cover.

Mammals common to the area are black bear, wolf, Canada lynx, moose and woodland caribou. Grizzly bears were recorded during the early historic period, but supposedly have long since disappeared. Mule deer occur sporadically. Soper (1941: 360) regards the "... impoverished terrain at higher elevations, such as Caribou Mountain and other plateaus of comparable character, or to great muskeg areas..." as

unsuitable to bison. Furthermore, wood bison prefer a Canadian Faunal Life zone and the Caribou Mountains are a modified Hudsonian zone. Consequently, "there appears to be no evidence that the bison in historic times, at least, ever resorted to this plateau, though they inhabited the prairie benches along the base of the high southern and eastern escarpments" (Soper 1941:365).

Avifauna include the white-fronted goose and whistling swan who migrate through the area, the large Canada goose, although it is scarce, and the abundant sandhill crane. Nine species of diving duck nest in or migrate through the region, but only the bufflehead and common goldeneye are frequent. Surface feeding ducks commonly found there are the mallard, pintail, american widgeon, blue-winged and green-winged teals, and the shoveller. Recorded game birds are spruce grouse, sharp-tailed grouse, willow ptarmigan, and sporadic occurrences of ruffed grouse.

Lake trout, walleye, northern pike and arctic grayling are present, but a fish resources study of the Caribou Mountain lakes indicates that productivity is generally low (Smith 1970).

## BIRCH MOUNTAINS

Forest cover in the Birch Mountains is classified as Boreal Forest Mixedwood (B.18a), a large important forest extending from southwestern Manitoba to northeastern British Columbia and the adjacent District of Mackenzie, N.W.T. where it is classified as Hay River mixedwood (B.18b) (Rowe 1972). The well-drained uplands have an abundance of white spruce and balsam fir mixed with trembling aspen, balsam poplar, white and alaska birches. Trembling aspen predominates except on drier tills and sands where jackpine is more frequent. Low lying areas and the upper water-catchment localities primarily along the western slopes,

develop black spruce and tamarack muskeg.

Topography in the 701m - 853 m a.m.s.l. upland is structured by the rolling glacial deposits dominated by a sandy alluvial non-calcareous till. Grey wooded soils predominate; however, those in the Birch Mountains lack the thick organic surface of peat that characterizes the Caribou Mountains.

The Birch Mountain climate is milder than that in the Caribous as frost free days number 100 rather than 60, the mean annual temperature range is 2.8<sup>0</sup>C less and the mean annual precipitation is 508 mm (20"). Mean temperatures for both uplands are about equal.

Mammals normally present are black bear, wolf, Canada lynx, moose and caribou. Mule deer and grizzly occurrences are sporadic. The latter, however, were once frequent in both uplands. Wood bison do not or very rarely wander into the Birch Mountains today, but did occupy it in the past. Gardiner Lake, for example, is termed Buffalo Lake by native people who frequent the area. A hundred years ago the Birch uplands became a sanctuary in that "... bison appear to have been practically exterminated south of the Peace by about 1875, with the exception of a number in the Birch Mountain sector, and possibly a few in the foothills of the Rockies" (Soper 1941:362). In regard to faunal succession, Allison (1973:N1718) has commented that moose will normally move out of an area becoming too heavily occupied by bison, apparently exercising a preference for solitude. The occurrence of bison depends to a great extent on the availability of a tall, coarse wet-meadow grass Calamagrostis canadensis and a sedge Carex atherodes.

Different species of geese, swans and cranes fly over the area but only the large Canada goose nests there. Diving ducks that abound are the lesser scaup, bufflehead and common goldeneye. Present but less frequent are the redhead,



canvasback, ring-necked, ruddy and white-winged scoter. Relatively abundant surface feeding ducks include the mallard, pintail, American widgeon, blue-winged and green-winged teals, and the shoveller. The ruffed, sharp-tailed and spruce grouses and willow ptarmigan comprise the game birds.

Lake trout, northern pike, arctic grayling and walleye are the more important fish species found in the Birch Mountains lakes and rivers. Namur and Gardiner Lakes at present are classed as Trophy Lakes.

#### PEACE RIVER

Along the Peace River near Ft. Vermilion the flat to gently rolling topography of the Fort Vermilion Lowland physiographic region reflects a history of sand dune and lake bed development altered by downcutting of the Peace River and other natural factors. Podzolic soils have formed in the sand dune area and degraded black soils in the silt-clay localities (Lindsay et al, 1960-1). Forest cover is of the Mixedwood (B.18a) type described above. A parklike vegetation dominated by aspen poplar with grass characterizes the immediate area. Lying at an elevation of 244 m a.m.s.l., or some 609 m lower than the Caribou Mountains upland, the climate is responsible for ameliorated conditions. The average maximum July temperature of 26.7°C (80°F) contrasts with an average January minimum of -23.3 to -26.1°C (-15° to -20°F) to produce a mean temperature range of 21.2°C (70°F) and an average frost free period of 100 days. Mean annual precipitation is 406 mm (16"). The area incorporates the Parkland and Lowland ecosystems and as such contains a faunal community comprised of black bear, wolf, canadian lynx, moose and woodland caribou. White-tailed deer and mule deer occur sporadically and although grizzly bear and bison are not found in the area today they frequented it well into the historic period.

Game bird species are similar to those described for the Caribou Mountains. Ducks are also similarly distributed but many species occur more frequently in the lowlands than the uplands. White-fronted and snow geese use the region generally west and south of Ft. Vermilion for staging areas.

Walleye, goldeye, northern pike and arctic grayling are common to the Peace River.

#### CLEARWATER-ATHABASCA RIVER

Survey in the Clearwater Lowland physiographic region encompassed a small portion of the Clearwater River and the Athabasca River right bank from Saline Lake in the south to just north of Fort Creek. Surficial deposits along the rivers are composed primarily of glacial outwash (lake and wind deposits, sand and gravel). North of Fort Mackay silt and clay lake deposits predominate. In well-drained locations the soils are Podzols and Acid Brown Wooded. Forest cover is classed as B.18a by Rowe (1972) and dominant vegetation along the river is aspen poplar. The presence of balsam fir distinguishes it from the other plant communities described. Back from the terrace edge toward the east moss bogs may cover 75% of the land. Exclusive of slightly increased precipitation the climatic regime is essentially the same as in the Ft. Vermilion area.

Black bear, wolf, Canada lynx, moose, mule deer and woodland caribou typify the mammalian fauna. White-tailed deer occur sporadically along the Athabasca. The species of avifauna are similar to those for the Birch Mountains. Fish resources include walleye, goldeye, northern pike and arctic greyling.

#### ENVIRONMENTAL SUMMARY

The Caribou and Birch Mountains uplands are similar in so

far as both are elevated areas with lakes presumably important to spring fishing parties. The cooler climatic regime in the Caribou Mountains, with more extensive permafrost and muskeg-black spruce vegetation, provides suitable habitats for moose and caribou only. In contrast, the milder climate of the Birch Mountains associated with generally well-drained land and grassy areas allows for occupation by the wood bison. Differences in vegetation and drainage facilitate overland summer travel in the Birch Mountains. While I can not argue biomass or productivity, the Birch Mountains appear a much richer region to occupy and exploit than the Caribou Mountains. A consequence of this is that one might expect to find a greater density of sites in the Birch Mountains.

The Peace and Athabasca rivers are dissimilar in that a denser vegetation grows along surveyed portions of the Clearwater and Athabasca than near Ft. Vermilion.

#### ETHNOGRAPHIC OVERVIEW

Remarkably little ethnographic information is available for the Beaver Indians, historic occupants of the study area, and a lack of specific resource utilization data necessitates that the following discussion be generalized and based on appropriate examples from the Beaver and the contiguous Sekani, Slave and Chipewyan. This approach is valid as ethno-linguistic boundaries were in a state of flux at contact and presumably so in the past (see for example Jenness 1967:383).

In reference to Slave Indians, Wentzel (1889:89) stated that the Beaver, as he called them, "... subsist upon every species of animals, birds and fish, making no exception from the elk down to the moose; from the swan to the smallest bird, the crow even is not excepted, and all fish is deemed equally palatable." Caribou were widely distributed in the

region, but concentrated in the Caribou Mountains where they were hunted while swimming streams and lakes. Mackenzie (1967:15) describes the upland as "inhabited by great numbers of deer (caribou), who are seldom disturbed, but when the Indians go to hunt the beaver in those parts; and, being tired of the flesh of the latter, vary their food with that of the former. This ridge bears the name of the Deer Mountain" (labelled Caribouef Mountains on his map). Goddard (1916:214) found no reference to hunting caribou on frozen lakes but suggests it may have occurred. Pounds were constructed by the Chipewyan on frozen forest lakes and the enclosure situated on the bank opposite to where the caribou were expected. They established their tents on a nearby eminence while the pound was in use (Nash 1975:3; Hearne 1958:50). Communal drives or pounds were not used by Slave who, instead, ran the animals down on snowshoe in winter or snared them summer and winter (Jenness 1967: 389-390). Snares were often tied to a loose 2 m log.

Bison frequented all but the Caribou Mountains. In reference to the Mackenzie River, Wentzel (1889:77) mentioned that "the banks on both sides are high and barren, which is supposed to have been occasioned by the great fires made in the Spring season by the inhabitants to clear the country of underwood, in order to enjoy more ease when hunting." Presumably the same applies to the Peace River. H. Lewis (pers. comm.) was told by older residents of the Bushe River Indian Reserve near High Level that extensive plains of grass existed where stands of timber are now found. The Beaver are reported to have hunted bison solely on a communal basis by driving them into pounds similar to those of the Plains tribes (Goddard 1916:214, Jenness 1967:383).

Moose were widely distributed throughout the region and often hunted during the mating season. In winter they were run down on snowshoes and speared.

One of the more important but least talked about resources is the hare. They were generally snared by placing a slip noose along a runway. Although not recorded it is possible that willow bark nets were used for summer and autumn rabbit drives.

Beaver would also have provided a dependable source of food in view of their sedentary habits. The easiest methods of procuring them included driving the beaver out of their lodge into a net, or blocking the lodge entrance and cutting a hole through the top and killing them with a beaver spear.

Black bear are numerous along the Peace and grizzlies used to be frequent. Mackenzie describes the latter as "grisly and hideous bear" that the "Indians entertain great apprehension of ... and they never venture to attack but in a party of at least three or four" (Mackenzie 1967:67,61). Bears are usually driven out of their den in winter and killed with deadfalls, spears or bow and arrow.

Waterfowl were most likely obtained during moult either by stalking or with a bow and arrow. There appears no indication that a net was used.

Fish reportedly supplied 50% of the Slave Indian diet and were caught in a 40 yd. x 10 yd. x 4½" mesh net (Wentzel 1889:84). Ice fishing was accomplished with spears, lures, hooks and nets. In Spring, when some fish migrated, stone fish weirs with a trap at the apex were employed (Goddard 1916:216).

#### ANNUAL CYCLE

The annual cycle probably included larger winter camps of tipis covered with caribou or moose skins. No mention is made of bison being used for the covering. Toboggans and snowshoes facilitated winter travel. Sustenance was obtained by hunting and possibly ice fishing.

In spring the winter camp would split into smaller groups or families who resided in brush shelters. Net fishing probably took place on smaller lakes and streams where the ice had melted. Fish would be split and dried for storage and fowl would be hunted. Bark and pitch was gathered at this time for the manufacture of canoes and baskets.

Summer was spent increasing stores for the coming winter. Toward fall, food supplies were augmented by the blueberries, chokecherries and low-bush cranberries present in the area. Berries, dried meat and dried fish were often kept in ground caches.

In autumn groups moved to other favoured hunting and fishing grounds where winter clothing was prepared. Little information regarding specific seasonal resource locations is available. Goddard (1916:216) mentions that spring fishing occurred south and southeast of the Ft. Vermilion area when other resources failed. Father Vandersteen, O.M.I., of Jean d'Or Prairie informs me that Cree residents of that reserve and Fox Lake, Little Red River and Fifth Meridian went into the Caribou Mountains to fish, preferably at Pitchimi Lake. A trip to Pitchimi from Fifth Meridian would take one day by foot. Purportedly people avoided the more westerly areas of the upland because they feared the storms there.

## CARIBOU MOUNTAINS SURVEY

### INTRODUCTION

Logistic and ethnographic factors prompted us to focus on Margaret, Eva, Semo, Pitchimi and Wentzel lakes followed by a 3 day survey of the Caribou Mountains' south slope (Figure 2). Finally, we spent a short period surveying the Peace River left bank near Ft. Vermilion. An initial air survey permitted us to cache supplies and note likely site locations. The availability of a Cessna 180 float plane coincidental with the abundance of spruce-muskeg prompted us to fly rather than walk between all but Margaret and Eva lakes.

We began by surveying Margaret Lake, the largest and westernmost lake in the research area. A small motorboat facilitated survey. Twenty-three stops were made at beaches, river mouths and outlets, and at the terrace on which Margaret Lake Lodge is situated. A total of 5 sites were recorded in 20 man-days on the 52.13 km. (32.4 mi.) lake perimeter.

Eva Lake is 8750 m (.72 mi.) east of and 30.5 m (100') above Margaret Lake. Testing there concentrated on an extensive, well-drained terrace along a west shore embayment. Prior aerial survey indicated that most of the lake basin was low, wet and densely vegetated and probably contained few, if any, sites. We focused on this terrace because a boat was unavailable and time short. Surface collecting and testing at the cleared Lands and Forests fly camp and farther south on the same terrace located 2 sites in 12 man-days. It is not certain that these sites should be considered separate entities.

Following research at Eva Lake we split into two 2-man parties and surveyed Semo and Pitchimi lakes for 6 man-days each. The former is situated 13.6 km (8.5 mi.) southeast of Eva Lake and is separated from it by low wet ground and spruce-muskeg vegetation. A traverse around the 11.15 km (6.9 mi.) lake perimeter recorded 4 sites in 7 stops. Most

# CARIBOU MOUNTAINS

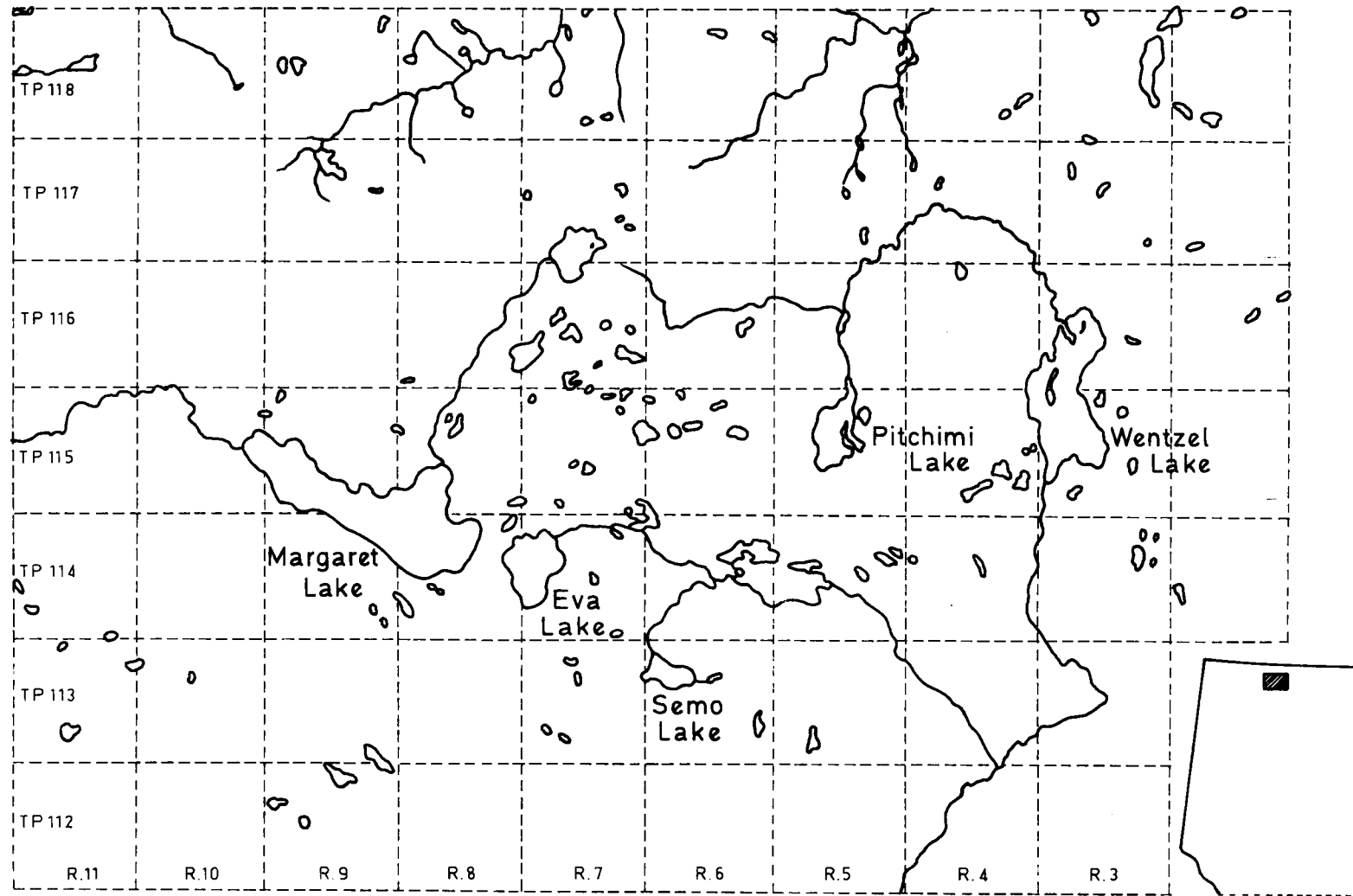


Figure 2



productive was a location at the west end of the lake where a series of well-drained terraces rise to form a small knoll. This is also the site of a collapsed trappers cabin.

Pitchimi Lake is about 23 km (14.3 mi.) east-northeast of Eva Lake. The survey of a 5.2 km (3.3 mi.) section of the lake shore focused on the island and two peninsulas on the east shore. A non-motorized leaky skiff facilitated our survey. Six sites were recorded in thirteen stops, ranging from a presumed historic log grave structure to small prehistoric activity areas.

Both parties surveyed 17.7 km (11 mi.) of the east and south shores of Wentzel Lake by foot in 36 man-days. Twenty-two stops were made and 5 sites recorded. The lake basin is low lying with a dense spruce-muskeg vegetation and occasional well-drained terraces. We focused on beaches, terraces and a forestry clearing. It quickly became obvious that occupation of the lake was never dense (for example, at 2 promising stops a total of 140 tests ranging from .25 m<sup>2</sup> to 1 m<sup>2</sup> were made and a single flake recovered). However, a promising site (IfPo 1) was located at an embayment on the south end of the lake. The 400 m long beach has stratified organic and sterile sand deposits to depths of about 1.4 m. Cultural material occurs from 25 cm to a maximum of 98 cm below the surface and is dated 1440 to 5220 B.P. Debitage was frequent but no finished tools were found.

Discussions with Father Vandersteen (O.M.I.) at Jean d'Or Prairie Indian Reserve east of Ft. Vermilion indicated that the bulldozed forestry road to Foggy Mountain fire tower approximates an old foot trail between the eastern Caribou Mountain lakes and Peace River. This deforested transect permitted us ready access to the south lip of the upland and the intervening terraces. Using the forestry tower camp as a base we surveyed 2 lakes west of the tower and the old and new airstrips but failed to record any sites. On the walk back

down the south slope we recorded and tested 10 terraces, presumably related to proglacial lake levels, but only one questionable artifact was recovered. Although no other possible artifacts were found, these terraces merit further testing. Eight man-days were spent surveying this section.

Data recovery improved when we surveyed the left bank of the Peace River near Ft. Vermilion. Traverses were restricted to the 267 m a.m.s.l. contour interval along the sand dune terrace edge or cuts immediately back from the edge. No lower more recent alluvial terraces were present. Discontinuous surveys from about 1.6 km (1 mi) upstream from the Ft. Vermilion (Hwy.58A) bridge downstream to the Caribou River mouth located 8 sites in 10 stops. Most consisted of light surface scatter on slope outwash, however one site (IcPx 1) was extensively tested.

#### SITE DESCRIPTIONS

##### MARGARET LAKE

###### IfPt 1

Location: 58°55'0" N. Lat. x 115°16'0"W. Long. U.T.M. 11VNR997318; SW¼, NW¼, S 22, T 114, R 8, W 5.

Site description: A sandy beach shore backed by black spruce on east end of Margaret Lake where creek enters lake. An open area partly cleared by bulldozer activity yielded 2 quartzite flakes. Organic lensing is present below surface.

Sampling: Area was surface surveyed and test excavated. One test went to 58 cm B.S. and revealed approximately 7 organic bands of 5 mm thickness. A possible fire-cracked rock was noted at 40 cm below surface, but no other artifacts were found. The two flakes recovered were on the surface.

Artifacts: Two non-descript light grey to dark grey quartzite flakes, one of which is cortexed. No retouch is present on either flake.

Discussion: Although more information may yet be derived from IfPt 1 further research is not merited.

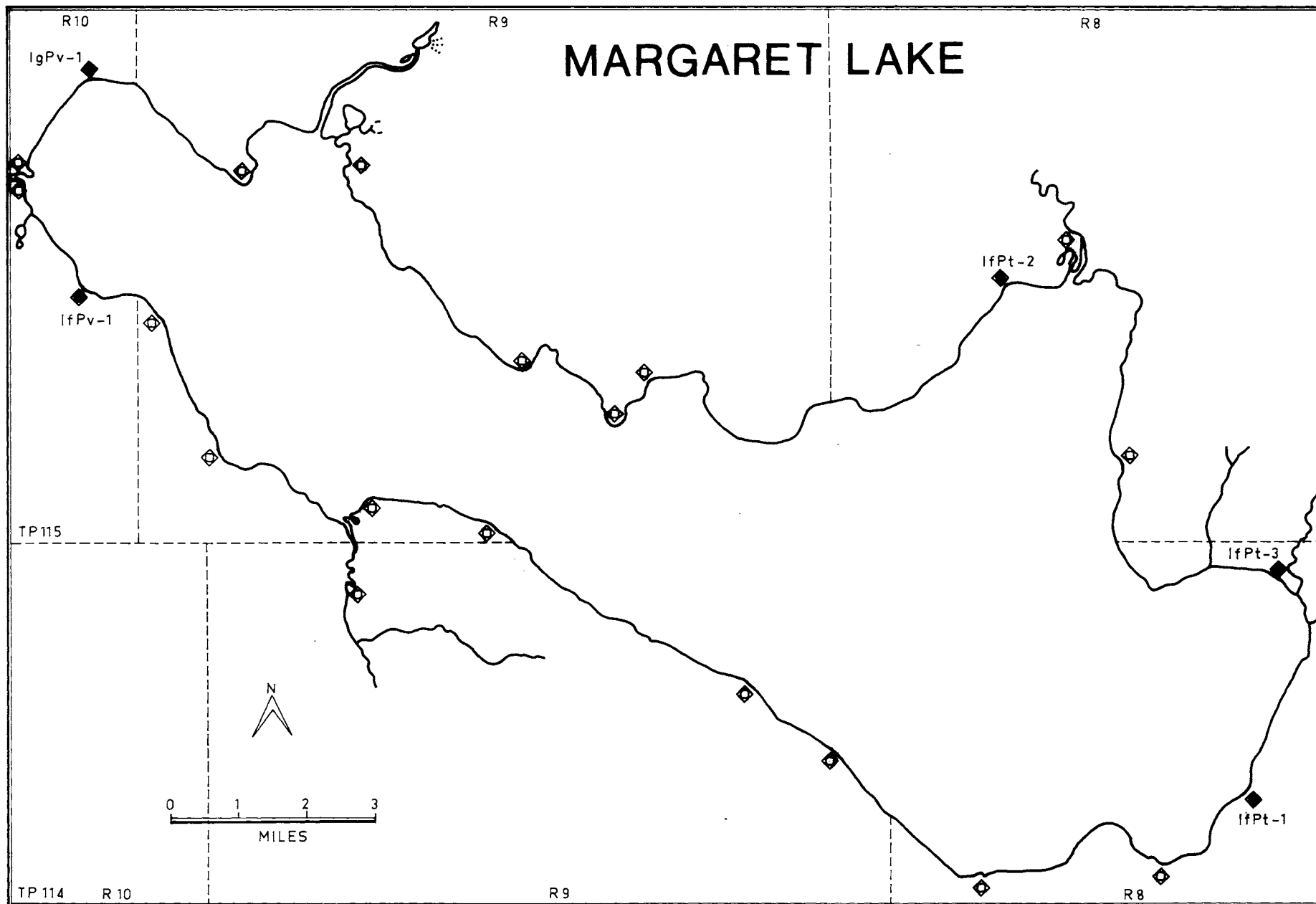


Figure 3

IfPt 2

Location: 58°59'00" N. Lat. x 115°19'10" W. Long. U.T.M. 11VNR965392; SW¼, SE¼, S 17, T 115, R 8, W 5.

Site description: An approximately 50 x 250 m beach with low but discrete storm tossed ridges. The well-drained area has scattered black spruce and Cladonia sp. interspersed. Surrounding topography and vegetation is low and wet. Beach is situated on the northeast end of Margaret Lake immediately west of the inlet from Rock Island Lake.

Sampling: Each ridge was test excavated at irregularly spaced 10-25 m intervals. Normal soil horizonation consists of a thin layer of Cladonia sp. overlying a heavily rooted humic zone, a greyish zone of eluviation, and a tan to orange coloured sterile zone. Artifacts mostly occur in the greyish zone.

Artifacts: A large open cooking pot of copper and a small enameled plate were recovered on the surface. Lithic artifacts included a battered rosy quartzite fragment, 2 black chert cortex flakes, a small fire-cracked (?) fragment, 2 grey chert cortex flakes, 18 thinning flakes and 4 shatter flakes. No diagnostic artifacts were found. Grey and rosy quartzites occurred most frequently.

Discussion: The large open copper cooking pot would date late 19th century on the basis of rivets being used instead of lugs to fasten the handle (J. Nicks, pers. comm. 1975). The small enameled saucer is not dated. Lithics include 6 different types of material, 7 cortex flakes, and both shatter and thinning flakes. Finished implements were probably produced at the site but none were found by us. The site is a multicomponent historic/prehistoric occupation. Lithic remains were scattered and it is not known if mixed prehistoric components or a single prehistoric component were present.

IfPt 3

Location: 58<sup>0</sup>57'0" N. Lat. x 115<sup>0</sup>15'0" W. Long. U.T.M. 11VPR004352; SW $\frac{1}{4}$ , NE $\frac{1}{4}$ , S 34, T 114, R 8, W 5.

Site description: Site is on a .8 km long terrace at the northeast end of Margaret Lake. A fishing lodge and associated bulldozed airstrip occasioned much disturbance. The terrace is well-drained; vegetated by spruce, low bushes and various grasses. A low hill lies north of the terrace.

Sampling: Sampling was mostly by surface collecting but limited testing was accomplished. Soil horizonation consists of a humic layer underlain by a fine dark orange sand containing some clay. Occasional tests revealed the humus and sand horizons separated by a greyish clay. No hearths or features were noted.

Artifacts: All artifacts recovered below surface were at the base of humus. A small side-notched quartzite point collected by M. Grimm, Grimshaw, Alberta was examined later in the year. Other artifacts included a core spall, a rosy quartzite cortexed discoidal, 3 use-retouched flakes (one of chert and 2 of quartzite), a battered decortication shatter flake and 3 unifaces (Plate I). Thinning flakes (27), shatter flakes (4) and cortex flakes (12) complete the pre-historic artifact inventory. Historic artifacts included a small white china-ware lip fragment and 3 pieces of heat warped glass.

Discussion: This is a multicomponent historic/prehistoric site. It is not known if the prehistoric assemblage is mixed. The extensive well-drained terrace could have been intermittently used. The only chronologically diagnostic artifact is a late small side notched point which, in other areas, appears ca. A.D. 500. This is the only site on Margaret Lake that warrants further investigation.

IfPv 1

Location: 58<sup>0</sup>59'0"N. Lat. x 115<sup>0</sup>33'0" W. Long. U.T.M. 11VNR831390; NW $\frac{1}{4}$ , S $\frac{1}{4}$ , S 13, T 115, R 10, W 5.

Site description: The last major sand beach southeast of the Ponton River at the west end of Margaret Lake. Vegetation consists of black spruce interspersed with flat open sand patches behind a sand beach. Muskeg is present near by.

Sampling: All artifacts were surface collected. Limited testing failed to uncover others.

Artifacts: A cortexed black chert nodule has bipolar battering and flake removal. A non-retouched black chert cortex flake of different material from the core and a grey black chert flat thinning flake were also recovered. Two quartzite thinning flakes, both lacking retouch, complete the inventory.

Discussion: A bipolar core and a flat thinning flake indicate two different core preparation techniques, the availability of larger nodules and the frugal use of materials. Whether or not all artifacts are contemporaneous is not known.

#### IgPv 1

Location: 59°02'0" N. Lat. x 115°33'0" W. Long. U.T.M. 11VNR804409; NW¼, S 19, T 115, R 9, W 5.

Site description: A ridged sandy beach at the northwest end of Margaret Lake. Beach is 50 to 70 m long and vegetated by spruce interspersed with exposed sandy areas. Muskeg occurs on the edges of the beach. Recent camp remains are evidenced by tin cans, a ketchup bottle, cloth, etc.

Sampling: A single brown-grey chert thinning flake found 2 cm below the surface has a dorsal ridge and distal unifacial retouch (Plate I). The ventral-distal edge area is heavily worn. Only limited lateral edge use-retouch is present. Retouch does not extend beyond flake margins.

Discussion: The presence of a single flake scraper limits discussion. Artifacts of brown-grey chert are not common on the Caribou Mountains.

## MARGARET LAKE SUMMARY

Margaret Lake is the largest body of water in the Caribou Mountains and as such was expected to contain a large number of sites along the shore. Clearly, the converse is true. A site that merits further research is IfPt 3, although much of it is inaccessible because of the fishing lodge and the remainder was destroyed in the construction of an air strip. The paucity of sites on this lake may be due to poor fishing and the low, wet terrain, or a dislike of the rough water that may come about due to the lake angle and prevailing winds. Most sites occur on sand beaches (83.3%) and one on a terrace (16.7%). The predominant lithic raw material is quartzite (65.12%), followed by non-black chert (19.22%) and black chert (11.63%). 'Other' comprises the remaining 3.49%.

### EVA LAKE

#### IfPt 4

Location: 58<sup>0</sup>55'30" N. Lat. x 155<sup>0</sup>13'30" W. Long. U.T.M. 11VPR025329; NE $\frac{1}{4}$ , SE $\frac{1}{4}$ , S 26, T 114, R 8, W 5.

Site description: A long and level well-drained terrace about 4 m above water level has been cleared to serve as a forestry camp on the west end of Eva Lake. Vegetation regrowth in the clearing includes scattered bushes and grass. Exposed soil is common. Surrounding vegetation is mostly black spruce. Soil strata consists of a 4 cm organic horizon over a brown alluvial mineral zone. A grey zone of eluviation is occasionally present.

Sampling: The cleared area was almost totally surface surveyed and some flake concentrations recorded. Nine separate tests ranging from .25 m<sup>2</sup> to 9 m<sup>2</sup> (total 17.5 m<sup>2</sup>) were excavated in areas of surface artifact concentration and also where none were noted. Most cultural material occurred toward the beach and central clearing. Hearth stains were found in two tests and in one was a small bone concentration.

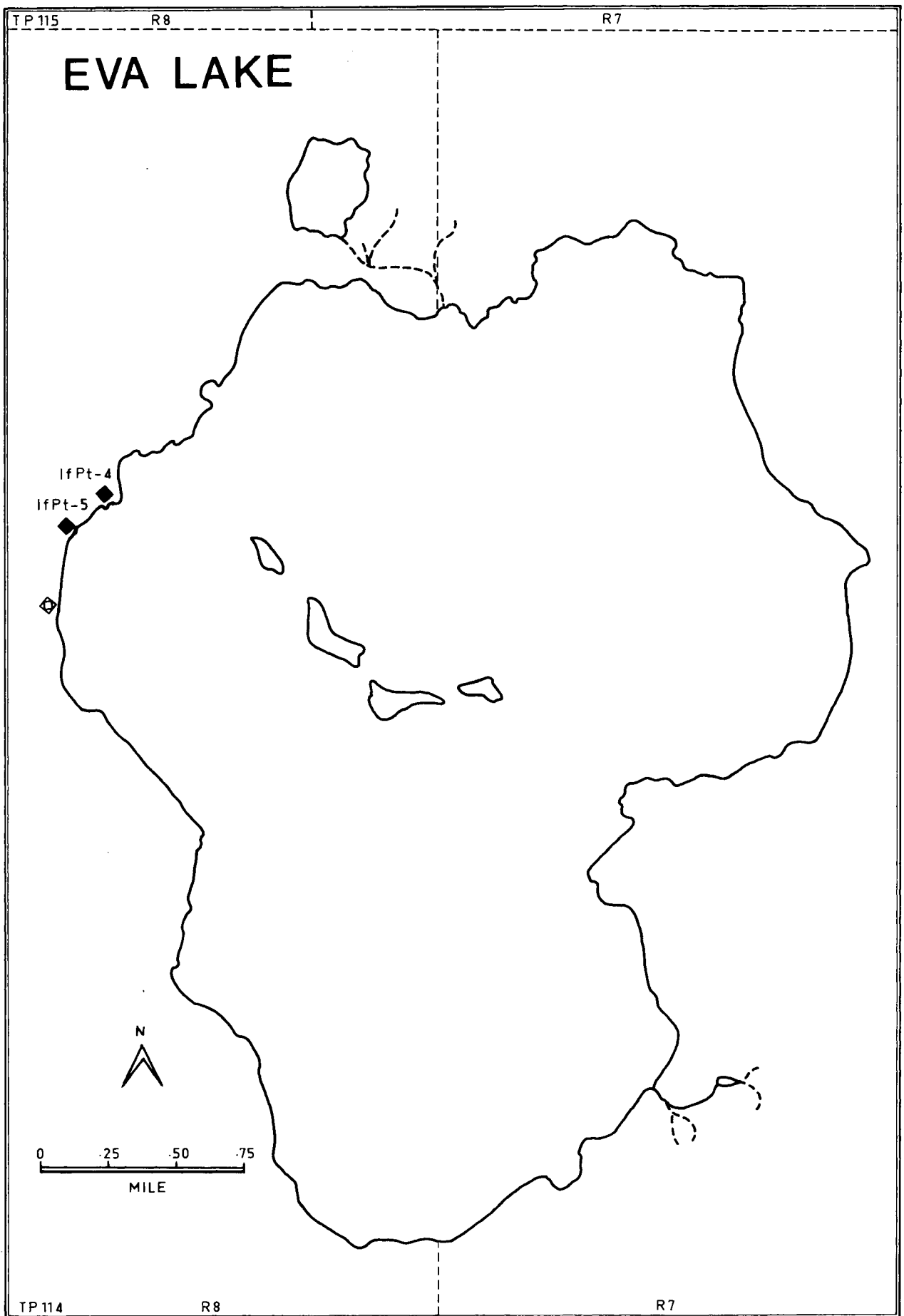


Figure 4



Artifacts: Surface artifacts include a chert uniface and a porphyritic chert flake with irregular lateral and dorsal flaking. Other surface collected lithics included 51 thinning and 8 shatter flakes. Test excavations uncovered a small chert thumbnail scraper and 2 battered quartzite flakes as well as five non-retouched cortex spalls, retouch, thinning and shatter flakes (Plate I).

Discussion: IfPt 4 is not totally destroyed, but so much disturbance has occurred that its value as a research site is probably nil. None of the items recovered is dated, and given the small sample and bulldozer disturbance it is impossible to delimit activity areas.

#### IfPt 5

Location: 58°55'28" N. Lat. x 115°13'31" W. Long. U.T.M. 11PVR024328; SW¼, SE¼, S 26, T 114, R8, W 5.

Site description: IfPt 5 is .25 km south of IfPt 4 on the same terrace. The black spruce interspersed with grass patches and some Cladonia sp. has not been cleared on this approximately 35 m long by 10 m wide site.

Sample: No surface exposures exist. Twelve .25 m<sup>2</sup> and six 1 m<sup>2</sup> tests were excavated. Typical soil horizons have 5 cm organic overlying sand and gravel with a 4 cm grey eluvial zone occasionally occurring. Lithics occurred mostly in the grey zone.

Artifacts: Only non-retouched lithics were recovered.

Discussion: No activity areas or features were noted. Of the thinning and retouch flakes, 17 were chert and 11 quartzite.

#### PITCHIMI LAKE

#### IfPq 1

Location: 58°59'30' N. Lat. x 114°45'35" W. Long. T 115, R 5, W 5.

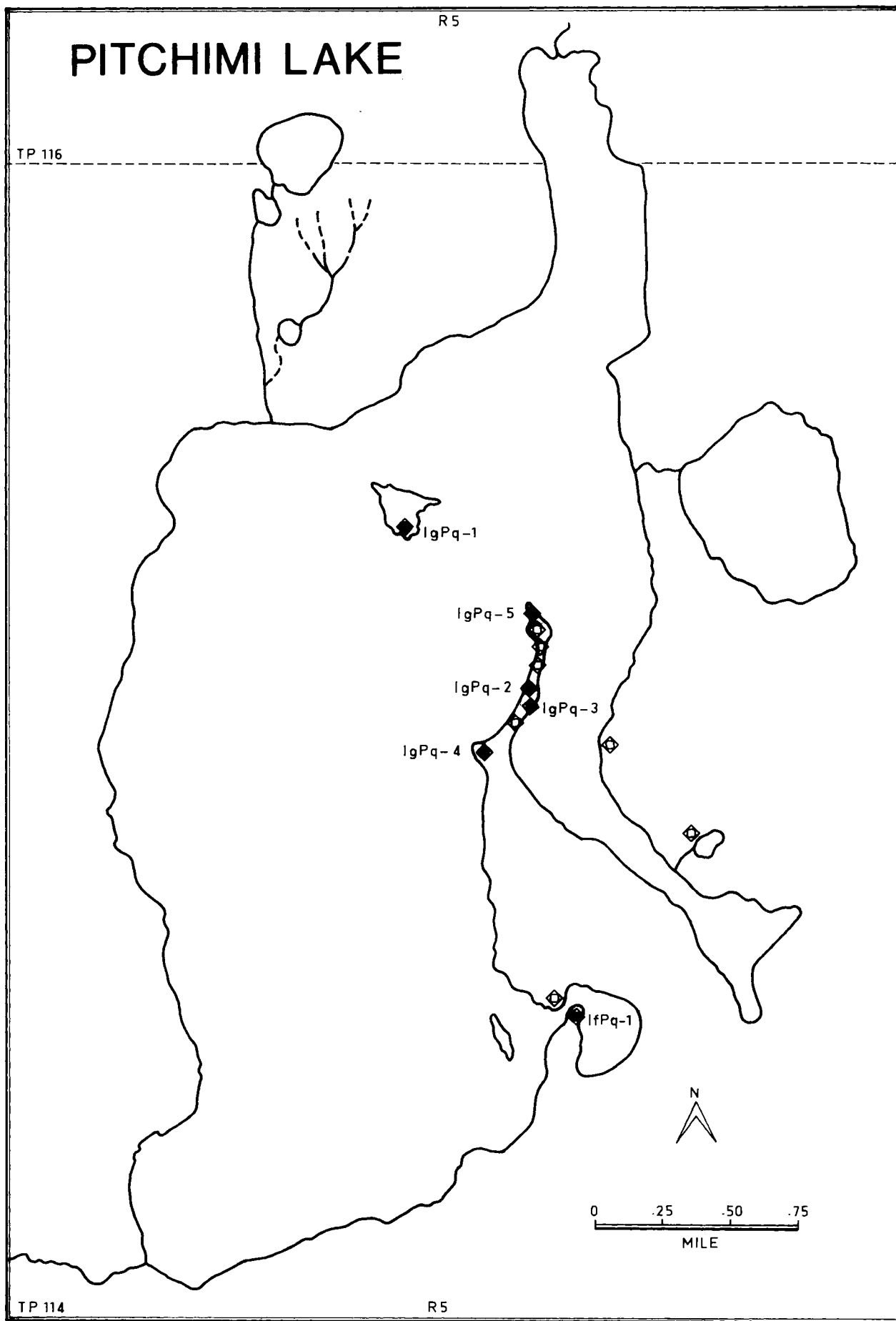


Figure 5

Site description: Site is at the north end of a small peninsula on the south side of the entrance to a small bay at the southeast end of Pitchimi Lake. The site measures about 35 m x 35 m in a fairly open spruce-aspen grove with tall grass ground cover.

Sampling: One 1 m<sup>2</sup> pit excavated about 35 m from either shore yielded 4 non-retouched thinning flakes and a hearth stain 14 cm below surface. The hearth stain was surrounded by a grey clay matrix. Flakes were associated with the hearth stain.

Artifacts: The four flakes (2 metasediment and 2 black chert) are non-diagnostic.

Discussion: Hearth stain and flakes are evidence of a prehistoric encampment, however, little else may be said in view of the small sample size.

#### IgPq 1

Location: 59°01'10" N. Lat. x 114°46'30" W. Long.  
T 115, R 5, W 5.

Site description: Site is on a twenty meter high flat (50 x 16 m) terrace and slumpage slope at the south end of the island on Pitchimi Lake. Vegetation consists of grasses, poplar and spruce. North of the terrace are thick growths of Ledum sp.

Sampling: Three small test pits were excavated into a 5 - 10 cm organic horizon overlying a brown silty-clay mineral horizon. A 30 x 15 cm concentric shaped hearth stain was exposed in a slump block. Testing uncovered no cultural material below surface.

Artifacts: Four quartzite thinning flakes, one (IgPq 1:1) of which has use retouch, comprise the total lithic inventory at the site.

Discussion: Other than that the south end of the island was occupied at some time in the past, little more may be said about this site. No other prehistoric indications of man were noted during a survey of the island.

IgPq 2

Location: 59°00'45" N. Lat. x 114°45'45" W. Long.  
T 115, R 5, W 5.

Site description: Site is in a low grassy clearing surrounded by spruce on the west side of a long peninsula on Pitchimi Lake. IgPq 2 is south of the second narrow spot on the peninsula and north of the recent fish camp.

Sampling: A 1 m<sup>2</sup> and a .16 m<sup>2</sup> pit were excavated. Soil includes a 6 cm humus over a 5 cm organic horizon beneath which occurred a grey eluvial zone containing cultural material or a red metamorphosed (hearth ?) area. Sterile soil is a wet grey-brown clay.

Artifacts: Two historic items, a late 18th or early 19th century metal button and a pot lug fragment were recorded (Plate II). Rocks associated with the hearth are considered culturally derived. Small bone fragments from a deer to caribou sized mammal were also present.

Discussion: Site is probably the remains of a fur trade period encampment.

IgPq 3

Location: 59°00'35" N. Lat. x 114°45'44" W. Long.  
T 115, R 5, W 5.

Site description: A collapsed log structure about 3 m from the lake shore on the east side of a long peninsula at Pitchimi Lake. Poplar and spruce dominate on this low (.5 m above lake level) peninsula.

Sampling: A sketch map only was made of structure (Figure 6).

Artifacts: No testing or collecting was done at this 1.5 x 3.3 m metal axe cut log structure.

Discussion: Grave(?) may relate to other historic occupations on Pitchimi Lake.

IgPq 4

Location: 59°00'30" N. Lat. x 114°46'05" W. Long.

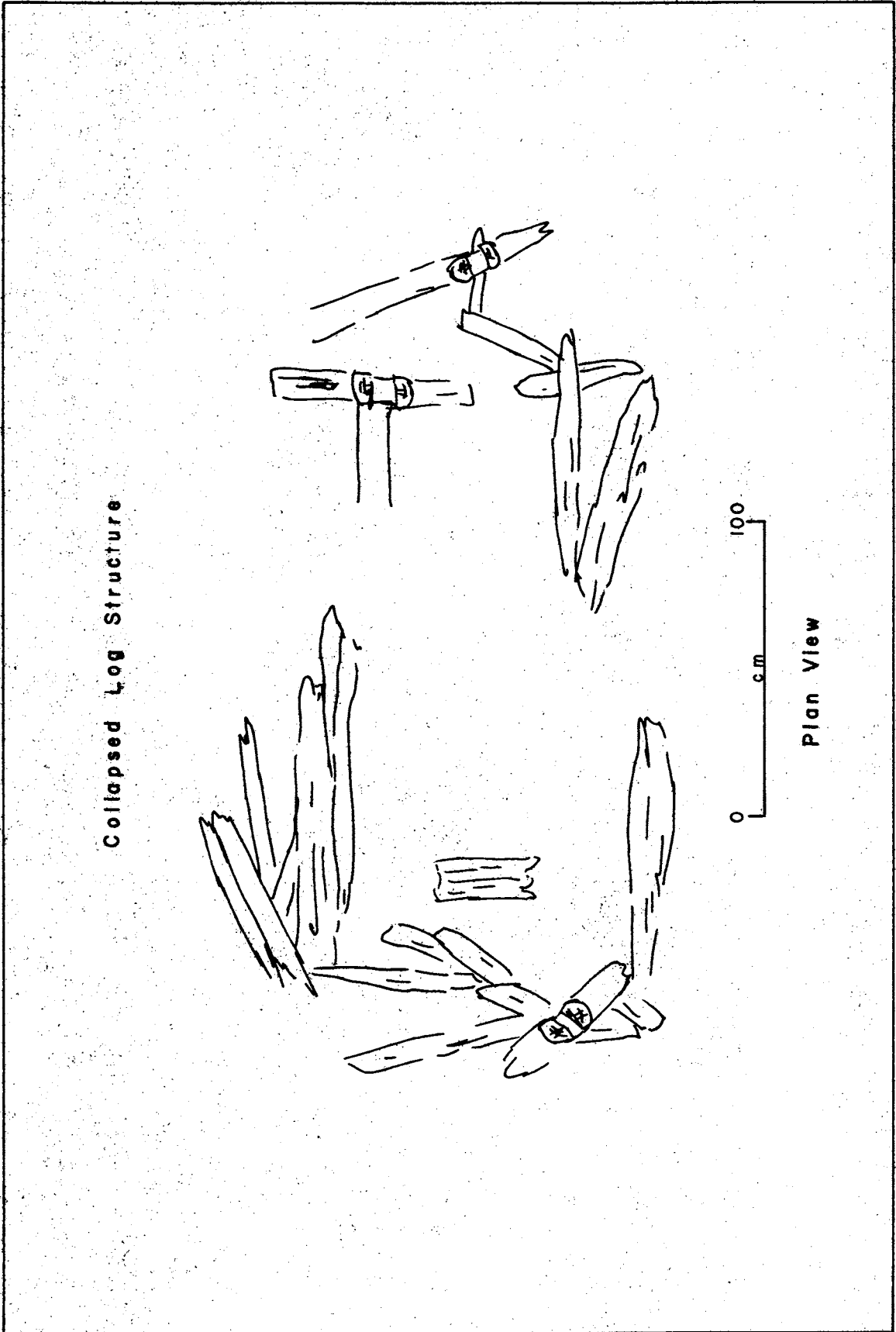


Figure 6

T 115, R 5, W 5.

Site description: A small point of land on the west side of peninsula at Pitchimi Lake and south of a modern fish camp. Area is approximately 70 x 35 m with a spruce-aspen upper story and a grass ground cover.

Sampling: Two test pits (.25 m<sup>2</sup> and 1 m<sup>2</sup>) were excavated. Soil horizons include a 5 - 6 cm organic mat over a 4 cm dark organic-charcoal horizon below which, in one pit, occurred a hearth within a brown-grey soil.

Artifacts: An obsidian retouch flake, 2 retouched quartzite thinning flakes, 2 small non-faceted hematite pebbles, miscellaneous thinning and shatter flakes, fragments of fire-cracked rock and a "sturgeon" hook comprise the artifacts (Plate II). All came from the 1 m<sup>2</sup> pit.

Discussion: Most cultural material was found in association with the red metamorphosed earth and charcoal horizon. A radiocarbon sample, however, was not submitted because of its small size. The 3 cm vertical separation between the "sturgeon" hook and the obsidian flake, both within the hearth area, indicate a possible prehistoric-historic transition site. This is partly supported by the flattened eyeless fish hook which may date late 18th century. The hook has raised initials HI on the shank end. The single obsidian flake has been sent to E. Nelson, Simon Fraser University, for source area identification. Trade and at least one obsidian tool are evidenced by the flake.

IgPq 5

Location: 59°00'55" N. Lat. x 114°45'44" W. Long.

T 115, R5, W 5.

Site description: A small site with spruce and grasses is situated on a low rounded tip at the north end of the peninsula on Pitchimi Lake.

Sampling: A single .48 m<sup>2</sup> test pit was excavated. Soil strata included a 4 cm sod cover over a 16 cm black soil-charcoal horizon under which is a grey C horizon. Charcoal

and metamorphosed earth (hearth ?) are present in one corner.

Artifacts: A single cortexed quartzite flake was recovered at 21 cm below surface within the black soil-charcoal horizon.

Discussion: The peninsula saw occasional usage as a camp.

#### PITCHIMI LAKE SUMMARY

Portions of the east side of Pitchimi Lake were surveyed and during a 3 day period 6 sites were recorded. Late 18th to early 19th century historic sites are most numerous and also localized on the peninsula. In this regard, Ft. Vermilion residents speak of a person who, not too long ago, found 2 copper pots on the peninsula. Unfortunately, no diagnostic prehistoric artifacts were recovered. Most interesting of the lithic remains is the obsidian flake thought derived from Anahim Peak in British Columbia (Wilmeth 1973). Whatever the precise source is, however, it is indicative of socio-economic interaction. Hearths were common in contradistinction to sites at Margaret and Eva lakes. The number of sites and size of the area surveyed suggest a relatively dense occupation vis-à-vis Margaret and Eva lakes, but a more intensive survey would have to be undertaken before any conclusive statements could be made.

#### SEMO LAKE

##### IfPr 1

Location: 58°51' N. Lat. x 115°59'30" W. Long. U.T.M. 11VPR157247; NE¼, NE¼, S 30 T 113, R 6, W 5.

Site description: IfPr 1 is a bluff top site on a 30 m long hill that sharply rises 12 - 15 m above Semo Lake. Soil has an 8 cm thick peat/organic layer over a 25 cm

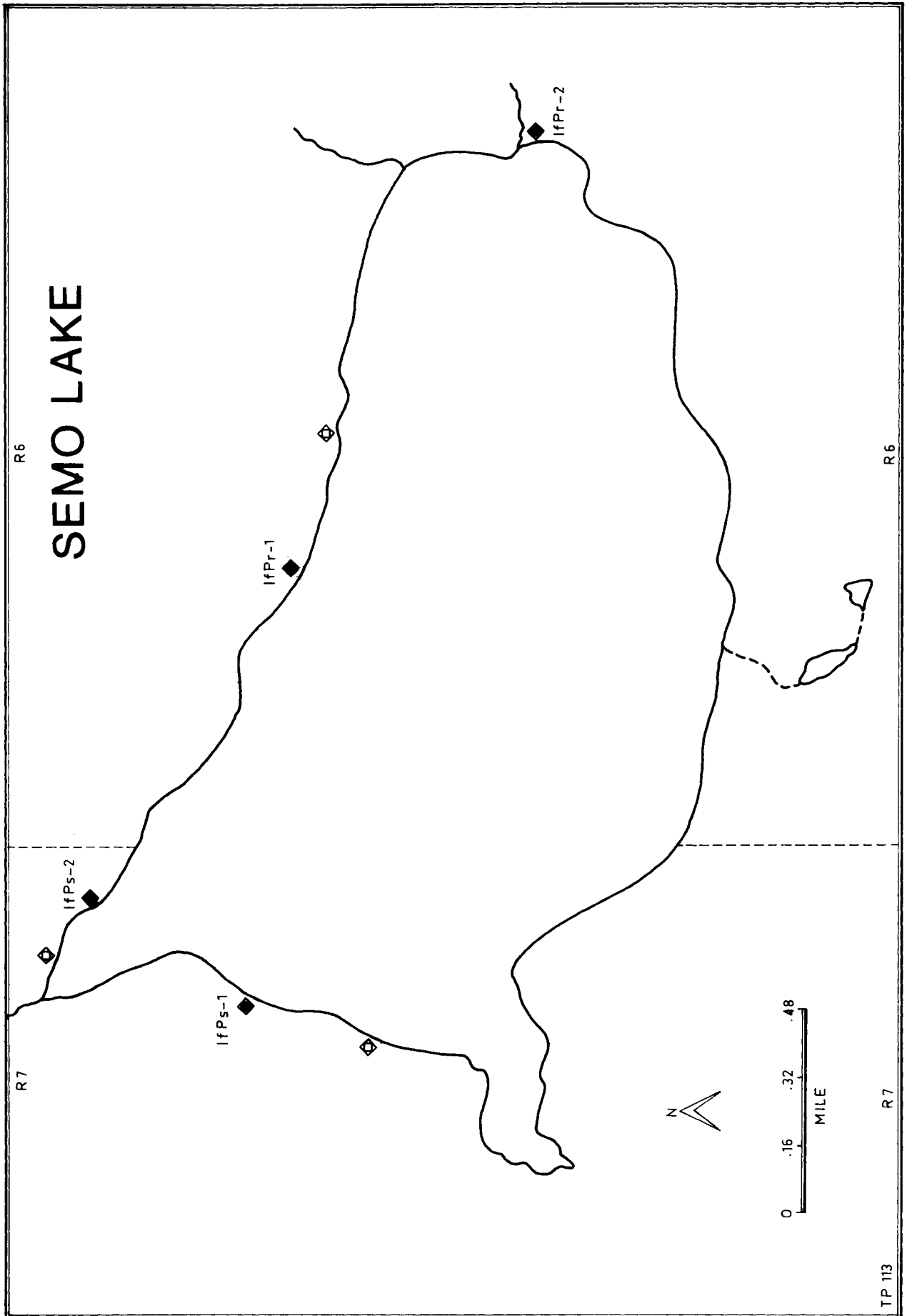


Figure 7



thick grey-brown clay matrix. Black poplar is the dominant tree species.

Sampling: Five .25 m<sup>2</sup> test pits were excavated.

Artifacts: One non-retouched quartzite thinning flake was recovered at the base of humus top of clay.

Discussion: Discussion is precluded by a paucity of material.

#### IfPr 2

Location: 58°50'30" N. Lat. x 115°57'30" W. Long. U.T.M. 11VPR173238; NW¼, SE¼, S 29, T 113, R 6, W 5.

Site description: Behind a beach on the south side of the river at the east end of Semo Lake is a 3 m high, 20 m long terrace of caribou moss and willow with an upper story of open spruce. The terrace is separated from the beach by muskeg.

Sampling: Twelve .25 m<sup>2</sup> test pits were excavated on the beach and terrace. Soil strata consists of surface vegetation and humus 0 - 5 cm, dark organic sand 5 - 10 cm, leached sand and gravel 10 - 15 cm and red-brown sand and gravel at 15 cm below surface.

Artifacts: Two non-retouched chert thinning flakes and 1 non-retouched quartzite thinning flake were recovered on the dark organic sand.

Discussion: This is probably the next best camping location at Semo Lake, but the small amount of cultural material recovered by extensive testing suggests a poor second.

#### IfPs 1

Location: 58°51' N. Lat. x 115°02' W. Long. U.T.M. 11VPR138248; SW¼, SE¼, S 36, T 113, R 7, W 5.

Site description: A collapsed log cabin is located on the 1st terrace of a hill and slope about 3 m above beach level. Vegetation consists of an aspen, willow and spruce upper story with grass, low bush cranberry and shrubs below.

Sampling: Thirteen .25 m<sup>2</sup> test pits were excavated and a surface survey completed. Soil strata include a 5 cm humus, a dark organic lens with some sand and gravel to 11 cm below surface and a coarse sand parent material.

Artifacts: All specimens are non-diagnostic debitage consisting of 23 retouch flakes, 13 thinning flakes and 2 shatter flakes plus 1 possible fire-cracked rock. None of the lithics was retouched. All were below the sod within a grey zone.

Discussion: This site has been occupied at least twice, once historically and one or more times prehistorically. Lithic remains were not stratified and do not lend themselves to technological separation. A variety of quartzites were utilized for the manufacture of tools.

#### IfPs 2

Location: 58°51'45" N. Lat. x 115°01'15" W. Long. U.T.M. 11VPR144255; NE¼, SE¼, S 36, T 113, R 7, W 5.

Site description: The north shore of Semo Lake rises abruptly to form a terrace 10 m in from the shore. It is vegetated by spruce, willow and caribou moss and backed by aspen and occasional spruce.

Sampling: Eight small tests were dug through horizons consisting of a 3 cm sod, 3 cm organic lens, 2 - 4 cm grey leached zone and a brown clayey alluvium.

Artifacts: Cultural material consists of 3 chert and 1 metasediment thinning flakes. None are retouched.

Discussion: IfPs 2 is a limited occupation site.

#### SEMO LAKE SUMMARY

Semo is the smallest of the Caribou Mountains lakes surveyed. A traverse of the total lake margin was accomplished and 7 stops excavated. Other than site IfPs 1 with the collapsed trappers cabin and evidence for

prehistoric occupation(s), none of the sites merit further investigation. Even IfPs 1, for that matter, must be deemed marginal given the amount of testing accomplished and the type of archaeological information recovered. In conclusion, Semo Lake does not appear to have held a very important role in peoples prehistoric subsistence rounds.

## WENTZEL LAKE

### IfPo 1

Location: 58°58'58" N. Lat. x 114°25'30" W. Long.

SE¼, SE¼, S 16, & SW¼, SW¼, S 15, T 115, R 3, W 5.

Site description: Site is on a 400 m by approximately 25 m crescentic shaped beach in a small bay at the southeast corner of Wentzel Lake. Vegetation includes spruce, aspen, birch, jackpine, willow, cranberries and moss. Behind the site is a dense growth of young spruce, willow and poplar.

Sampling: Ten 1 m<sup>2</sup> test pits were excavated to a mean depth of 80 cm in 12 man-days (Figure 9). No surface artifacts were noted. Eight tests were dug on the lower front beach and 2 on the slightly higher rear beach. Stratified geological and cultural deposits were present. All pits were excavated to sterile deposits or until water seeped in.

Artifacts: Two artifacts, in a total of 521 lithic specimens were present (Plate II). One (IfPo 1:27) is a biface trimming flake of brown chert or chalcedony, the other (IfPo 1:37) is a black chert flake or spall, possibly a bipolar core fragment. Both lithics were from upper strata. Retouch and thinning flakes comprise almost 50% each of the flake forms. Non-black chert totaled 318 pieces (61%) of the lithic raw material.

Discussion: Charcoal samples from strata at 25 cm, 40 - 45 cm, 60 - 65 cm, and 85 - 87 cm below the surface yielded

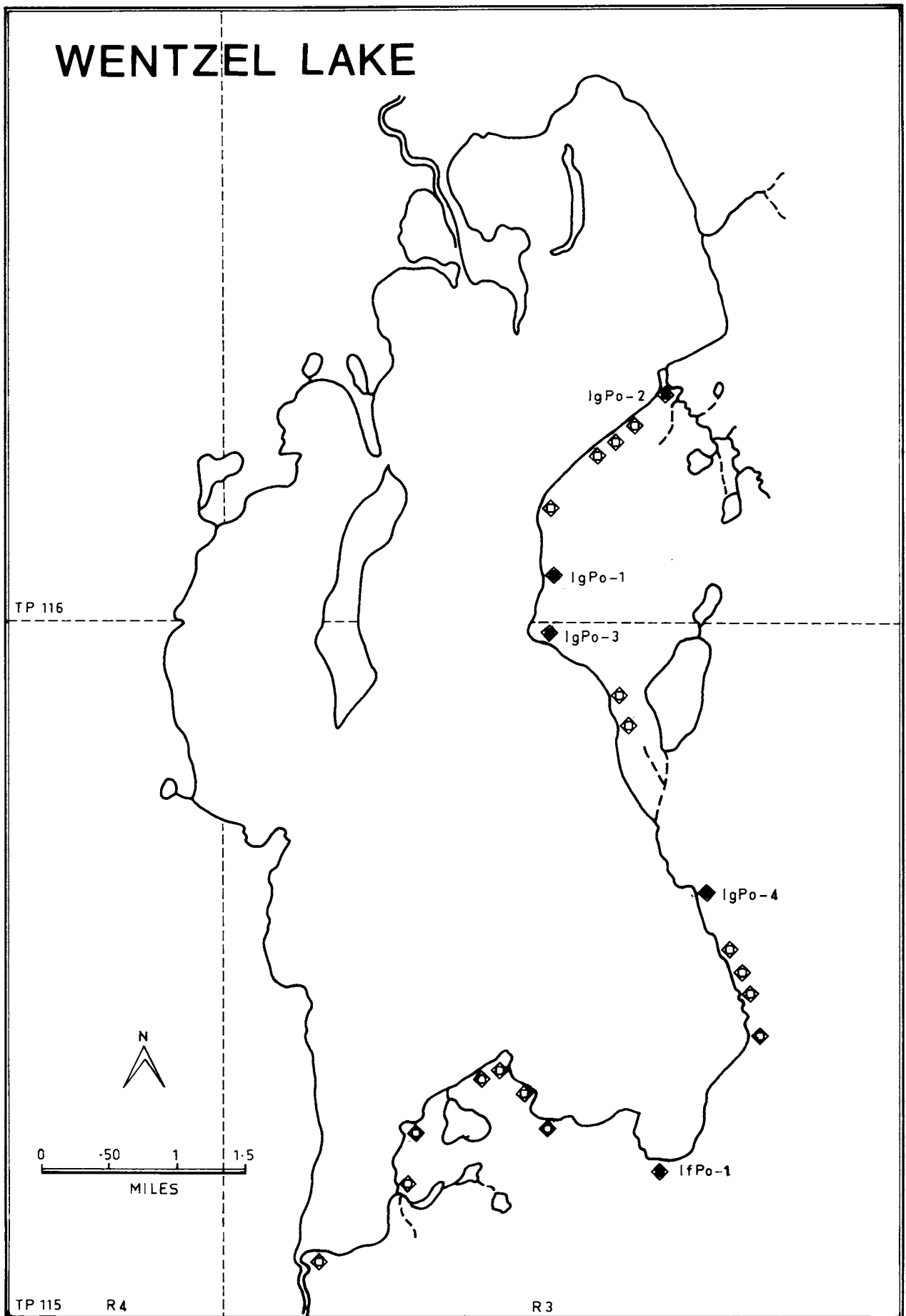


Figure 8

IfPo-1  
WENTZEL LAKE

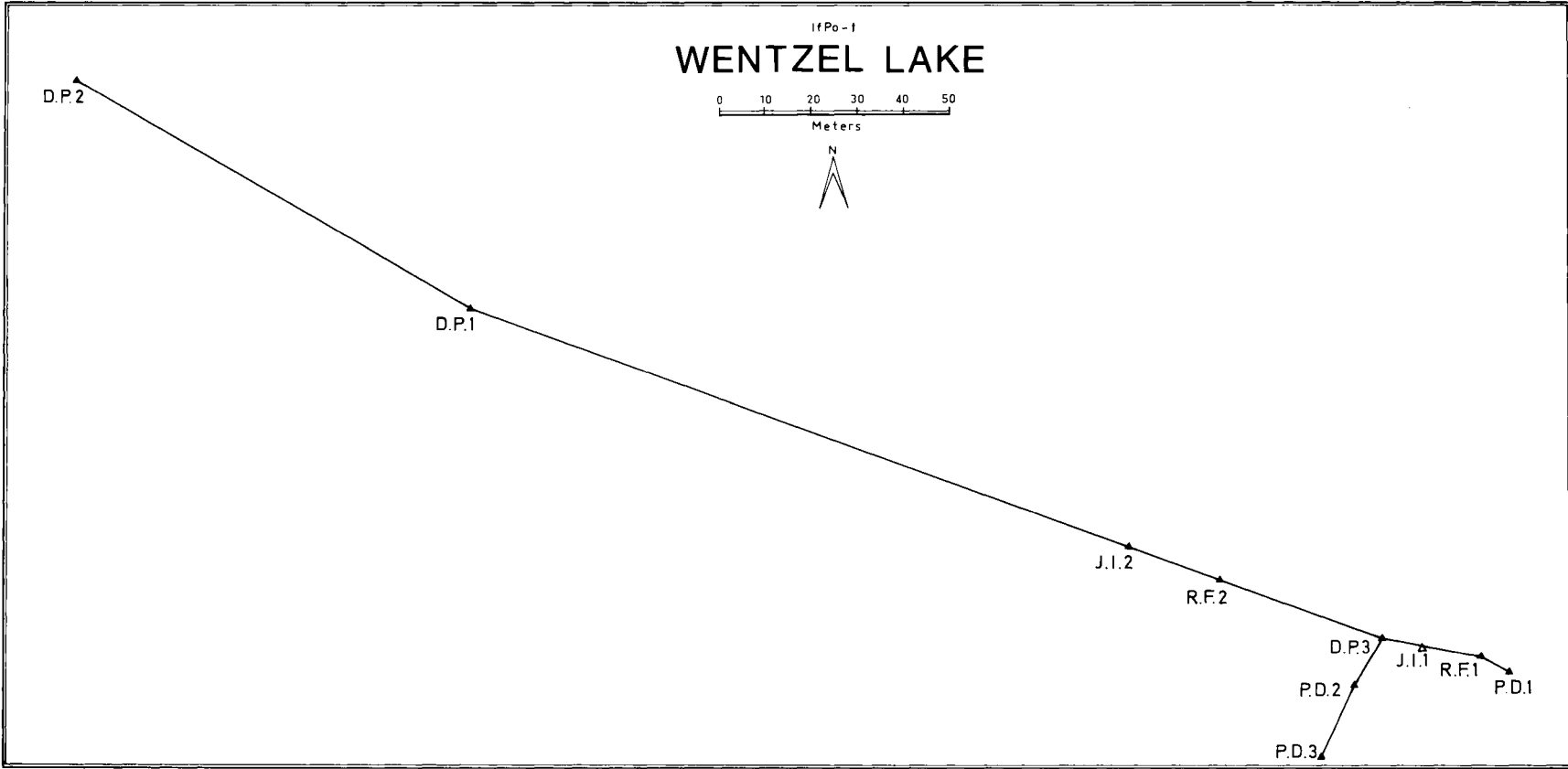
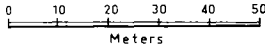


Figure 9

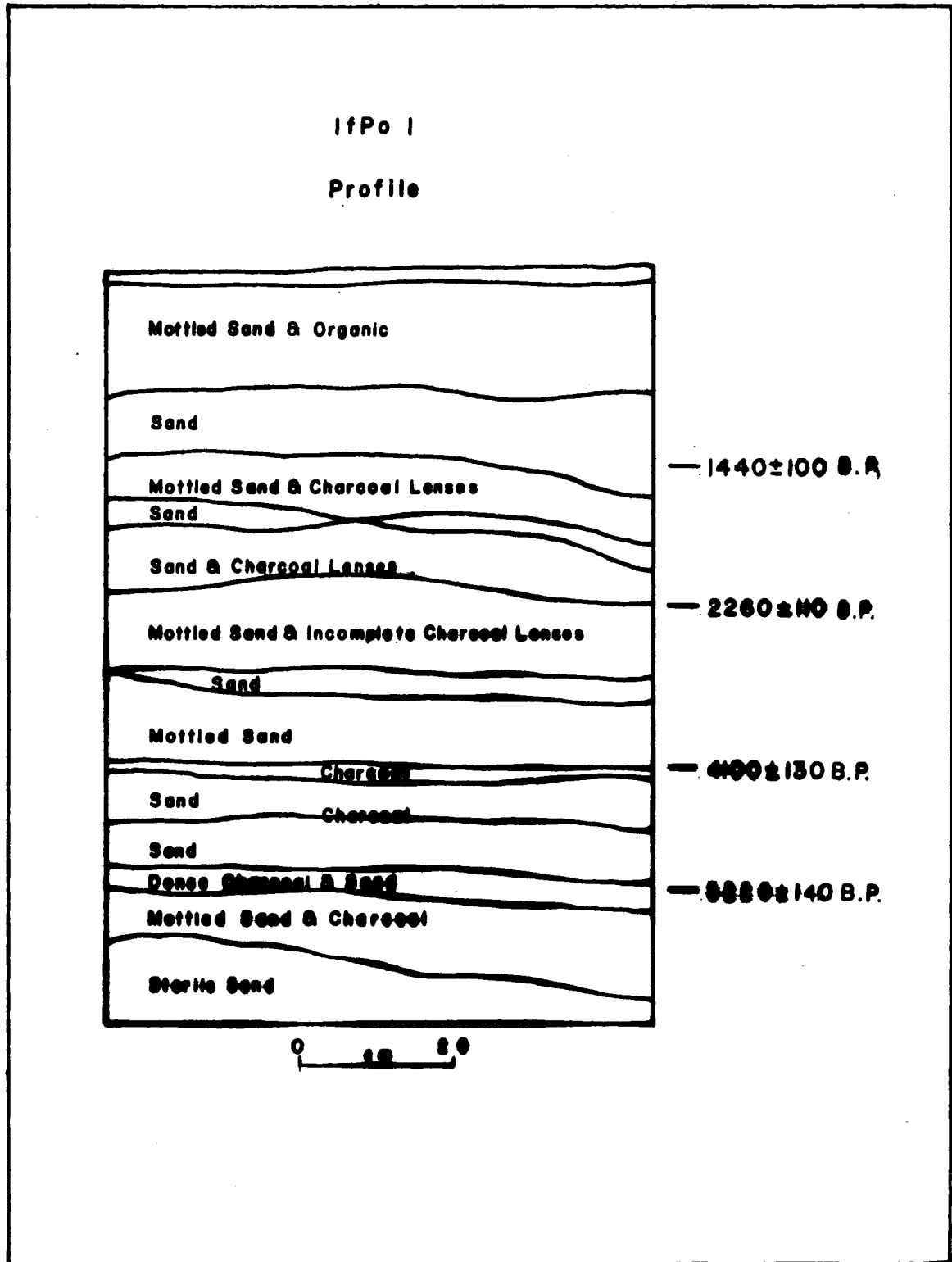


Figure 10

radiocarbon assays of  $1440 \pm 110$  B.P. (R L. 529),  $2260 \pm 110$  B.P. (R L. 530),  $4100 \pm 130$  B.P. (R L. 531) and  $5220 \pm 140$  B.P. (R L. 532), respectively (Figure 10). Organic banding was found in all test pits and cultural material occurred in 6 of the 8 pits. Dated strata contained or were directly associated with lithic debitage. More extensive excavation should uncover dateable floors and activity areas. The lack of finished artifacts is most probably a result of limited testing rather than actual absence.

#### IgPo 1

Location:  $59^{\circ}02'30''$  N. Lat. x  $114^{\circ}27'00''$  W. Long.  
T 116, R 3, W 5.

Site description: A small beach in a shallow bay between 2 small points on the west side of Wentzel Lake. Vegetation is mostly spruce and aspen interspersed with Cladonia sp. ground cover. A light grey sand occurs under the A horizon.

Sampling: Numerous small tests were excavated in random fashion and each of the three terraces on this 35 m long beach were sampled.

Artifacts: A grey chert thinning flake was recovered.

Discussion: This beach was infrequently used prehistorically.

#### IgPo 2

Location:  $59^{\circ}03'45''$  N. Lat. x  $114^{\circ}25'40''$  W. Long.  
T 116, R 3, W 5.

Site description: At the northeast end of Wentzel Lake are a series of four terraces about 400 m long with an open jackpine and spruce tree cover. Aspen occur along the site margins. Ground cover consists of pine needles, low bush cranberry, "British Soldier" and lichens. The lower terrace is approximately 23 m above lake level and each succeeding terrace is 1 - 2 m higher. The north and south area margins are marked by streams.

Sampling: Sixty-five .25 m<sup>2</sup> tests were excavated and each terrace sampled. The alluvial soil includes a dark organic sand (0-3 cm), over a grey sand (3-10 cm) and a brown sand (10 cm). Lenses of organic matter occasionally occur. Cultural material was found in one pit in a Grey-ashy horizon (10 - 18 cm below surface) under a burned organic horizon at 9 cm below surface.

Artifacts: Thirteen lithic specimens were recovered at the north edge of terrace 4. Chert and quartzite thinning flakes were most frequent. One flake (IgPo 2:1) may be derived from a core rejuvenation flake on the basis of its having 3 linear facets on the dorsal face and a flat platform. Specimen IgPo 2:2 is an angular multifaceted quartz core with numerous step fractures on one surface.

Discussion: The small amount of cultural material recovered at IgPo 2 is quite surprising considering the location between two streams, open vegetation and well-drained soil. As 65 test pits were excavated, this is not due to inadequate sampling. The recovered specimens do not lend themselves to dating.

### IgPo 3

Location: 59°02'00" N. Lat. x 114°27'00" W. Long.  
T 115, R 3, W 5.

Site description: A 150 m long south facing beach with 13 beach ridges on the east shore of Wentzel Lake. Spruce trees are scattered but denser toward the back. Cladonia sp., and low bush cranberry comprise the ground cover. Troughs between ridges may have standing water. A few mature jackpine occur along the beach front.

Sampling: Seventy-two surface tests were made, although a few were deeply excavated. Matrices included humus and a dark organic horizon (0 - 2 cm), a grey brown sand mottled with charcoal (2 - 10 cm) and a grey brown sand (10 - 48 cm).

Artifacts: Three flakes were recovered on the surface. A pink water worn quartzite flake (IgPo 3:1) has been



bifacially retouched and snapped in 3 places. Two black chert thinning flakes also occur.

Discussion: It was expected that a greater abundance of cultural material would be located here.

#### IgPo 4

Location: 59°00'30" N. Lat. x 114°25'45" W. Long.  
T 115, R 3, W 5.

Site description: A bulldozed clearing in a small embayment at the southeast side of Wentzel Lake measures about 170 x 35 m. The clearing is approximately 1 - 2 m above lake level and slopes upward to the east. Surrounding vegetation is dominated by dense black spruce and muskeg.

Sampling: Eight test pits (total 6 m<sup>2</sup>) were excavated in various parts of the clearing. Soil horizons consisted of a dark organic (0 - 10 cm), a grey ashy deposit with roots and charcoal (10 - 19 cm), and a grey horizon with occasional charcoal flecks (19 - 25 cm). Gravel is rare in these deposits.

Artifacts: Two quartzite core remnants and 61 thinning flakes of a different quartzite material were recovered (Plate II). One core (IgPo 4:1) and 56 flakes came from the base of the organic A horizon and the B horizon (5 - 15 cm B.S.) in a single 2.2 m<sup>2</sup> pit. The other core (IgPo 4:13) was found at 12 cm B.S. in a distant pit. This quartzite pebble core is much more easily identified as a core in view of the numerous flake scars present at one end.

Discussion: Were it not for the artificial clearing we would probably not have stopped here to survey. Given the concentration of debitage in one pit it appears that prehistoric people were similarly inclined.

#### WENTZEL LAKE SUMMARY

Survey at Wentzel Lake was directed at the east and south

margins and 5 sites were recorded. One (1Fpo 1) is a deeply stratified multicomponent site dated A. D. 510 to 4075 B. C. (see Damon et. al., 1974). Chert was utilized slightly more frequently than quartzite at Wentzel Lake

## CARIBOU MOUNTAIN TERRACES

### 1dPs 1

Location: 58°38'20" N. Lat. x 115°02'15" W. Long. U.T.M. 11VPR143002; NE¼, NW¼, S 12, T 111, R 7, W 5.

Site description: Terraces on bulldozed trail to Foggy Mountain fire tower on the south slope of Caribou Mountains were tested. Vegetation in disturbed area consists of a thick tall grass. Undisturbed upper storey cover is dominated by large mature spruce or poplar.

Sampling: Two to four .25 m<sup>2</sup> test pits were excavated on or to the side of the bulldozed trail on each terrace flat. Most were tested off the trail. The particular terrace from which an artifact was recovered is the highest (503 m a.m.s.l.) and oldest terrace.

Artifacts: An abraded core-flake was recovered 8 cm below the surface in the organic horizon. This metamorphic specimen has a triangular abraded facet, abraded ridges and some possible retouch along one edge. The object has not been struck from a core nor have larger flakes been removed from it. Whether or not this item was intentionally formed is uncertain. It may be a bulldozerfact (Figure 19).

Discussion: If intentionally formed, the artifact may relate to terrace occupation.

## PEACE RIVER

### IcPx 1

Location: 58°28' N. Lat. x 155°52'30" W. Long. U.T.M.

11VNQ6681; NW¼, S 13, T 109, R 12, W 5.

Site description: Site is on the upper terrace (267 m a.m.s.l.) of the Peace River left bank downstream from Boyer River and 1 mile upstream from Caribou River. Soil on the 20 x 25 m grassy clearing is weakly developed podzol based on sand dune derived parent material. Bordering vegetation is presently dominated by aspen, but this may be a result of cultivation and disturbance along the site edge.

Sampling: Four 1 m<sup>2</sup> and 4 .24 m<sup>2</sup> pits were excavated to about 25 cm below the surface. Artifacts were recovered at a maximum of 24 cm below the surface. Maximum soil development includes a 0 - 12 cm organic, about a 12 - 25 cm fine textured reddish-silt clay, and a light grey-brown sandy-clay-silt at greater than 25 cm below surface.

Artifacts: Almost 600 lithic specimens, mostly quartzite retouch flakes, were recovered at IcPx 1 (Plate III). Artifacts were of black and grey chert and quartzite. A small lanceolate biface (IcPx 1:126) of black chert and an asymmetric black chert uniface (IcPx 1:127) are not temporally or spatially diagnostic. A quartzite uniface fragment (IcPx 1:114) and a battered grey chert uniface (IcPx 1:20) were also present. The latter may have undergone thermal alteration. Two core modules, one (IcPx 1:2) of quartzite and the other (IcPx 1:3) of grey chert were recorded. The latter has a platform and flake scars that emanate from various directions. Core IcPx 1:2 is little more than a slightly altered cortexed cobble. A crude biface (IcPx 1:4) of black chert has a very irregular pitted and flaked surface although it is of cryptocrystalline material. Two quartzite spall tools were present as were small pebble hammerstones (?). Evidence for both bipolar workmanship and the reduction of cores by percussion flaking occurs.

Discussion: The presence of a lanceolate biface, unifactes, spall tools, bone fragments, core remnants, miscellaneous

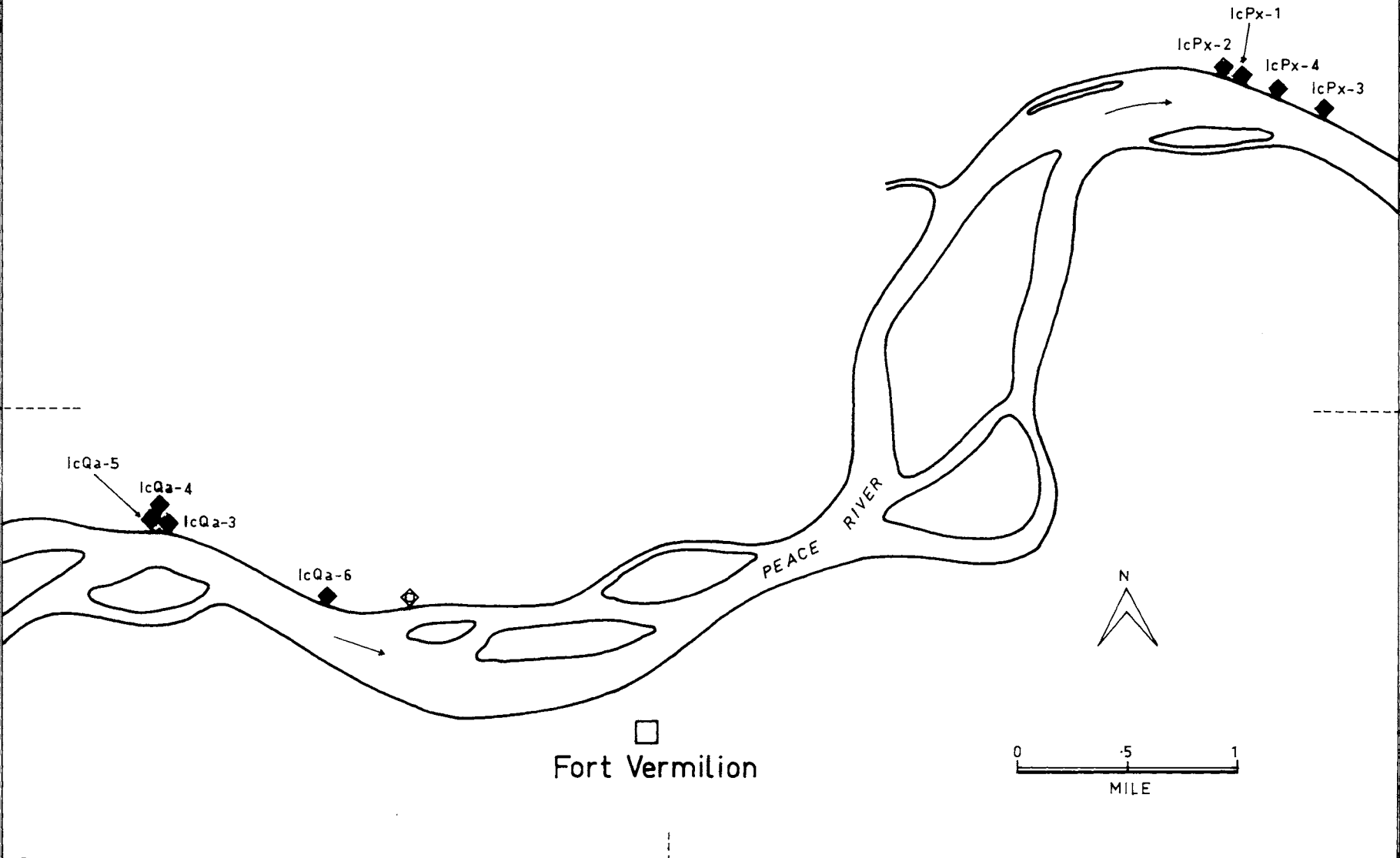
TP 109

R 13

R 12

TP 109

# PEACE RIVER



TP 108

R 13

R 12

TP 108

Fort Vermilion

0 .5 1  
MILE

Figure 11

flakes and a hearth indicate a campsite. Similarly, the cluster of artifacts and debitage toward the terrace edge may reflect a single occupation. The vertical distribution of cultural material lessens as one proceeds back from the terrace edge. A radiocarbon sample obtained from the hearth was considered too small for assay. Thinning, retouch and shatter flakes occurred in the percentages 19.2/80.5/.4.

#### IcPx 2

Location: 58°27' N. Lat. x 115°53' W. Long. U.T.M.  
11VNQ6581, NE¼, S 14, T 109, R 12, W 5.

Site description: A bluff clearing and point of land 267 m a.m.s.l. present on the Peace River left bank downstream from Boyer River, upstream from IcPx 1, and to the right of an intermittent stream valley. The grassy clearing is bordered by aspen. Soil is a grey wooded podzol based on a sand parent material.

Sampling: Surface survey.

Artifacts: One black-grey chert thinning flake with both weathered and non-weathered surfaces contiguous along a straight ridge on which polish is present. Polish could well be natural.

Discussion: Precluded by sample size and context.

#### IcPx 3

Location: 58°27'30" N. Lat. x 115°51" W. Long. U.T.M.  
11VNQ6781; SE¼, S 13, T 109, R 12, W 5.

Site description: Slope wash along the Peace River left bank upriver and near its junction with Caribou River. Vegetation includes grass, rosebush and aspen.

Sampling: No testing.

Artifacts: One flat and ovoid cortexed siltstone flake with marginal intentional unifacial retouch on part of one edge (Plate III).

Discussion: Site and artifact are minimal. A single flake was found on slope surface 2 m from bluff top.

#### IcPx 4

Location: 58<sup>0</sup>27'30 N. Lat. x 115<sup>0</sup>52' W. Long. U.T.M. 11VNQ6681; NW $\frac{1}{4}$ , S 13, T 109, R 12, W 5.

Site description: A terrace remnant midway between IcPx 1 and IcPx 7 on the Peace River left bank. Spruce appears on the north face, grass on the terrace top and aspen on the south face.

Sampling: The surface collected artifact was in situ and eroding out of the terrace remnant at 20 cm below surface and 10 cm below the organic horizon.

Artifact: A single grey quartzite biface (IcPx 4:1) rectangular in plan view (Plate III).

Discussion: Site was destroyed by slope slumpage. The biface was well-executed and is of unusual form for this area. Temporal and spatial comparisons are not available.

#### IcQa 3

Location: 58<sup>0</sup>24'14" N. Lat. x 116<sup>0</sup>08'24" W. Long. U.T.M. 11VNQ508741; SW $\frac{1}{4}$ , NE $\frac{1}{4}$ , S 29, T 108, R 13, W 5.

Site description: This "site" extends from immediately under Ft. Vermilion bridge (Hwy. 58A) on the left bank to an abandoned ferry(?) road 70 m upriver. Shrubs and sage occasionally occur on the slope and dense aspen growth covers the terrace top.

Sampling: Terrace slopes were surface collected for slope outwash artifacts and two 1 m<sup>2</sup> test pits excavated. All artifacts were from the surface.

Artifacts: Included are a metasediment uniface (IcQa 3:2), battered quartzite biface (IcQa 3:9), and thinning and shatter flakes in the ratio 5:2 (Plate III). Buried bone

fragments (moose?) were recovered in tests.

Discussion: This site consists of surface artifacts found on slope outwash and a uniface (IcQa 3:2) from a bulldozed context. The site and collection primarily serve to indicate use of the locality which considering the horizontal scatter may have been extensive.

#### IcQa 4

Location: 58°24'24" N. Lat. x 116°08'28" W. Long. U.T.M. 11VNQ508743; SW¼, NE¼, S 29, T 108, R 13, W 5.

Site description: A borrow pit on Peace River Terrace left bank 100 m west of Ft. Vermilion bridge (Hwy. 58A). Aspen surrounds the bulldozed area.

Sampling: Surface survey only.

Artifacts: Two black chert thinning flakes, the larger (IcQa 4:1) of which may have undergone thermal alteration.

Discussion: The limited sample and context disallow any interpretive statements. Suffice it to say a site, perhaps a continuation of IcQa 3, did exist in this location prior to bulldozer activity.

#### IcQa 5

Location: 58°24'14" N. Lat. x 116°08'29" N. Long. U.T.M. 11VNQ506741; SW¼, NE¼, S 29, T 108, R 13, W 5.

Site description: High bluff near and west of gravel-sand quarry on left bank of Peace River 3 km downstream from Ft. Vermilion bridge. Bluff vegetation includes grass, clover, roses, aspen and poplar.

Sampling: Surface survey of bluff face and 2 1 m<sup>2</sup> tests on bluff top.

Artifacts: One translucent grey chert thinning flake with well-formed platform and dorsal surface flake scars was recovered on slope about 5 m from top.

Discussion: Precluded by data limitations.

## PEACE RIVER SUMMARY

A site survey along the Peace River was restricted by the maximum extent of cultivation or other disturbances that reached almost to the terrace edge. The density of sites in the two survey areas indicates frequent usage of the terrace. No lower recent alluvial terraces exist but it is unlikely they would have yielded sites considering research upriver by Fladmark (Fladmark et. al. 1975).

None of the sites may be assigned definite temporal parameters. Quartzite fragments predominate (55.19%) over cherts (44.32%) and both bipolar and non-bipolar core and flake preparation techniques were noted. Thinning, retouch and shatter flake percentages are in the proportion 21/78/.7. The single campsite tested yielded both bipolar and non-bipolar remnants, chert and quartzite raw material, hide preparation implements and a small biface. Unfortunately, there are no temporally diagnostic artifacts.

## CARIBOU MOUNTAINS AND PEACE RIVER SUMMARY

In general, the Caribou Mountains upland was unproductive. Of the lakes surveyed only Pitchimi contained a dense concentration of sites. IfPo 1 on Wentzel Lake was the single deeply stratified site encountered during the field season. However, no diagnostic artifacts were recovered. A traverse of the Caribou Mountains south slope recorded terraces presumably related to proglacial lake levels, yielded one questionable artifact. Only 31% of the places we stopped at proved to be sites. Either we exercised poor judgement in selecting possible site locations or, I hasten to add, many potentially good locations had not been utilized.

By contrast, the Peace River has tremendous potential. Survey along a 3.2 km stretch located 8 sites. Clearly,



extensive research should be accomplished on longer stretches of the river to obtain information pertaining to both early man and later prehistoric assemblages.

## CLEARWATER-ATHABASCA RIVERS AND BIRCH MOUNTAINS SURVEY INTRODUCTION

Survey of the Clearwater began with our being transported by jet boat to a point 6.4 km upriver from the Clearwater-Christina Rivers confluence (Figure 12). From there we surveyed downriver and in 2 days we stopped 11 times and recorded 2 sites. Initially we examined bed rock and alluvial terraces but the latter soon proved unproductive and we ceased to test them. Although only a brief survey was accomplished, it is apparent that sites may readily be found on the bedrock terraces.

After completing this brief survey we test excavated for 2 days at the northwest end of MacDonald Island, situated at the Clearwater-Athabasca juncture. Only recent cultural remains were uncovered in the alluvial silt.

We next proceeded to Fort Mackay by truck and arranged to spend 4 days surveying 45 km of the Athabasca River (Figure 13) right bank from the south end of Saline Lake to just past Fort Creek, exclusive of the stretch between Muskeg River and Haight Island, an area previously examined (Sims and Losey n.d.). Twenty-six stops and 12 sites were recorded. Most sites were on exposed well-drained terraces. Doubtless a less rapid survey could readily locate even more sites in the area.

Discussions with Fort Mackay residents regarding lakes and rivers in the Birch Mountains indicated that although the area was extensively utilized in the past and formed part of the seasonal rounds it was now rarely frequented. Consequently little specific information about favoured spots or productive fishing localities was forthcoming. Our aim was to

travel by canoe from Eaglenest to Gardiner Lake and survey lake and river margins where appropriate (Figure 14). A Cessna 180 on floats was chartered to take us to Eaglenest Lake. The flight path and a subsequent aerial reconnaissance indicated that the river connecting Eaglenest and Sandy Lakes was shallow but navigable. We surveyed the Birch Mountains from 5 - 25 August 1975, stopped to test 107 times and assigned 49 Borden numbers.

Eaglenest or Ladies Lake is an approximately 3 x 1.5 km lake surrounded by low terrain with a black spruce-muskeg vegetation. A flight around the lake prompted us to focus on the south end where terracing and drier ground was available (Figure 15). This proved to be a heavily occupied area and 2 of the most important sites found were situated here. Seven sites in 11 stops were recorded in 2 days.

A single day was spent examining the margin of Clear Lake, a small narrow lake southeast of Eaglenest, and in the process, 13 stops and 8 sites were noted. None of the Clear Lake sites was extensive, however.

The Clear and Eaglenest Lakes outlets merge and flow south to Sandy Lake. This approximately 8 x .75 km lake and the smaller water body appended to it were almost completely surveyed over a 7 day period (Figure 16). As befits the name, sandy beaches abound and it was on them that 4 of the 8 sites were found in the course of 16 stops.

Crossing to Big Island Lake (Figure 17) necessitated portaging and canoeing across a low divide. Most sites along this 8 x 2.4 km lake were situated on terraces. Forty-six stops were made and 16 sites recorded in a five

day survey of the total lake margin and islands.

The portage to Gardiner Lake (Figure 17) took only 15 minutes one way. Alternatively, we could have canoed via a connecting drainage. Our survey of this lake was restricted to the section north of the township 98 boundary, the southern shore having already been surveyed by C. Sims (n.d.). The total lake margin, including small ancillary lakes and an arm, were examined in 6 days. During that time 28 stops and 10 sites were recorded.

### CLEARWATER-ATHABASCA RIVERS

#### HdOs 1

Location: 56°39'20" N. Lat. x 111°00'15" Long. SW¼, SW¼, S 26, T 88, R 7. W 4.

Site description: A grassy clearing 3 - 4 m above water level on the Clearwater River left bank about 6.4 km upriver from the Christina River juncture. Site is on the outside edge of a deep bend. Lowbush cranberry, poplar and willow comprise the vegetation based on a shallow silt-sand soil.

Sampling: Ten test pits of approximately .25 m<sup>2</sup> each were excavated.

Artifacts: A bone handled metal table knife fragment (Plate IV) and 15 pieces of debitage were recovered.

Discussion: Historic and prehistoric components were present but spatially separated. Some specimens of Beaver Creek quartzite (Synchrude 1974-2), the most frequently utilized raw material, may have been heat altered. The knife blade has a French(?) inscription on it.

#### HeOs 1

Location: 56°40'30" N. Lat. x 111°07'30" W. Long. SE¼, S 36, T 88, R 8, W 4.

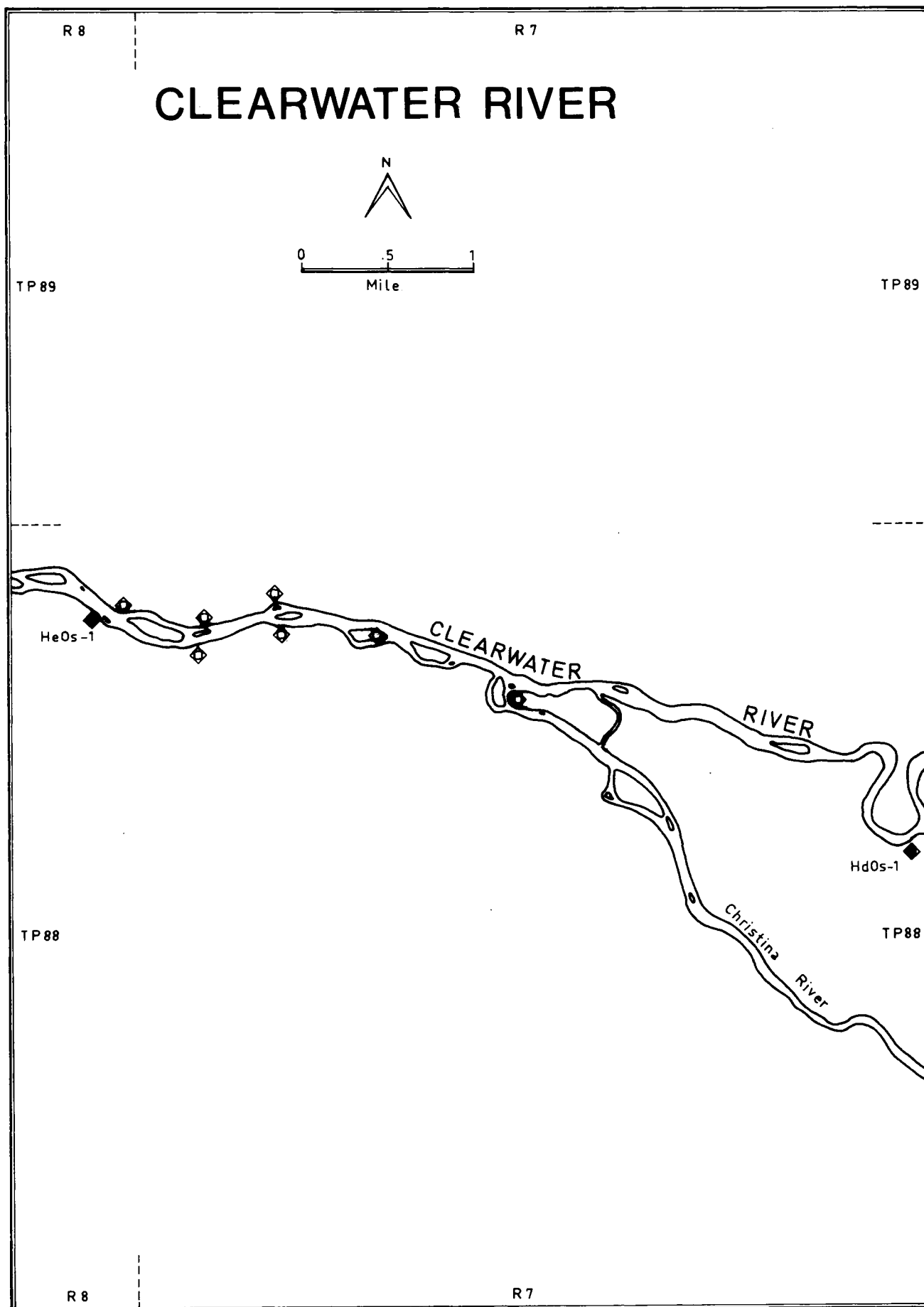


Figure 12

Site description: On an 8 m high limestone ridge approximately 13 m wide by 170 m long oriented NW-SE and lightly vegetated with aspen, grass and shrubs were two circular depressions of 10 m and 2 m diameter. On the same terrace were the remains of a burnt cabin wired for electricity.

Sampling: The ridge, larger depression and nearby areas were sampled by excavating 9 .25 m<sup>2</sup> and a 1 m<sup>2</sup> test.

Artifacts: Four uniface specimens, a flake with a burin-like scar and debitage were recorded (Plate IV).

Discussion: The terrace edge where the unifaces were uncovered was most productive. One is a split chert pebble uniface, the others are of Beaver Creek quartzite. Testing of the depression lip did not give any indication of it's being cultural.

Hg0v 33

Location: 57°04'00" N. Lat. x 111°30'45" W. Long. U.T.M. 12VVU684249, SW¼, NE¼, S 15 T 93, R 10, W 4.

Site description: Surface remains on a beach associated with upper and lower terraces on the Athabasca River right bank near the south end of Saline Lake.

Sampling: Two .25 m<sup>2</sup> tests were excavated on the higher terrace and 3 on the lower alluvial terrace.

Artifacts: An ovoid metal specimen, rosy quartzite cortex remnant and a unilateral biface were recorded (Plate V).

Discussion: Each artifact was surface collected on the gravel beach. Neither of the lithic items, however, appears water worn and it is assumed that they are derived from the immediate area. Test excavations failed to uncover any cultural material.

Hg0v 34

Location: 57°05'30" N. Lat. x 111°33'00" Long. U.T.M. 12VVU670271, NW¼, NE¼, S 21, T 93, R 10, W 4.

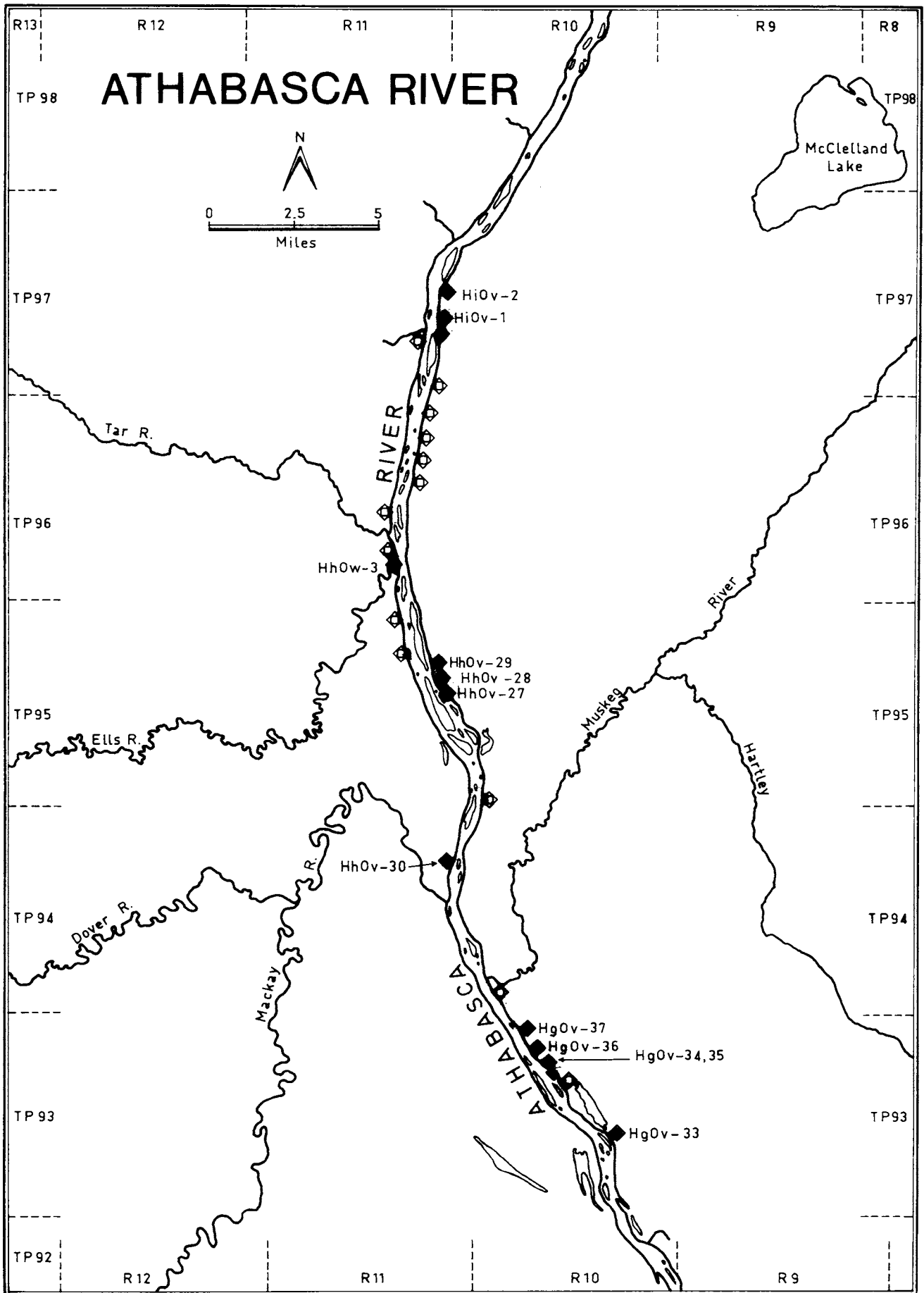


Figure 13

Site description: An 8 - 10 m high bluff on the Athabasca River right bank near the Saline Lake outlet. Area is vegetated with spruce, aspen, lowbush cranberry and assorted shrubs. The site is physically separated from Hg0v 35 by an erosional depression.

Sampling: Two .25 m<sup>2</sup> tests were excavated.

Artifacts: Seven Beaver Creek quartzite thinning flakes and a quartzite uniface were obtained (Plate V).

Discussion: Beaver Creek quartzite is readily available in the area. The quartzite uniface is more like a dark grey quartzite noted on the Birch Mountains.

#### Hg0v 35

Location: 57° 5'30" N. Lat. x 111°33'30" W. Long. U.T.M. 12VVU662280, NW¼, SW¼, S 28, T 93, R 10, W4.

Site description: See Hg0v 34.

Sampling: Sampling was by surface survey and the excavation of 5 .25 m<sup>2</sup> tests.

Artifacts: A pebble with two linear flake scars, some rosy quartzite flakes and assorted Beaver Creek quartzite debitage were recorded (Plate V),

Discussion: The culturally altered pebble fragment is not the result of bipolar percussion. Most material was recovered on the surface rather than in tests.

#### Hg0v 36

Location: 57°05'45" N. Lat. x 111°34'00" W. Long. U.T.M. 12VVU656287, NE¼, NE¼, S 29, T 93, R 10, W 4.

Site description: About 400 m downriver from Hg0v 35 was located a flat 10 m high poplar covered bluff.

Sampling: Sampling was restricted to a surface survey.

Artifacts: A rosy quartzite cortex spall, retouched chalcedony flake, Beaver Creek quartzite biface remnant and a flake were recorded (Plate V).

Discussion: Based on the material recovered, physical situation and sampling approach, this location should be examined further.

Hg0v 37

Location: 57°06'25" N. Lat. x 111°34'30" W. Long. U.T.M. 12VVU662293, S½, S 32, T 93, R 10, W 4.

Site description: Site is situated on either side of a small creek on a 7 m high spruce and poplar vegetated terrace.

Sampling: A surface survey only was accomplished.

Artifacts: A flake uniface and five thinning flakes were recovered (Plate V).

Discussion: Of the lithic material noted, Beaver Creek quartzite was most favored. A large (65 x 48 m) thinning flake attests to the availability of ample sized cores.

Hh0v 27

Location: 57°15'10" N. Lat. x 111°38'00" W. Long. U.T.M. 12VVU616457, NE¼, SE¼, S 24, T 95, R 11, W 4.

Site description: A high heavily vegetated terrace near Ings Island on the Athabasca River.

Sampling: Sampling consisted of a surface collection and the excavation of three .25 m<sup>2</sup> test pits, two of which were dug into the bluff face.

Artifacts: A uniface, core rejuvenation flake and hammerstone as well as over 370 flakes were recovered (Plate VII).

Discussion: Most material came from a 3 m area along the bluff edge. Excavated materials were located between 7 and 30 cm below the surface. Beaver Creek quartzite was the primary lithic material and in view of the close horizontal distribution probably reflects flint knapping at one point in time. The vertical distribution may be accounted for by disturbance due to natural factors such as frost activity.



Hh0v 28

Location: 57°15'40" N. Lat. x 111°38'00" W. Long. U.T.M. 12VVU612464, NW¼, NE¼, S 24, T 95, R 11, W 4.

Site description: A badly disturbed landing and supply area on a right bank upper terrace opposite the downstream end of Ings Island. Large depressions for storage tanks and the construction of roads has taken place at this location.

Sampling: Surface collecting only was accomplished.

Artifacts: Two core remnants and some debitage were collected (Plate VII).

Discussion: Both Beaver Creek quartzite cores have irregular multifaceted flake scars. Ten thinning flakes of Beaver Creek quartzite and an altered(?) chert flake were collected. It is certain that some tool manufacturing occurred at the site, but so much disturbance has taken place that it is impossible to assess the range of activities.

Hh0v 29

Location: 57°15'40" N. Lat. x 111°38'00" W. Long. U.T.M. 12VUU612464, NW¼, NE¼, S 24, T 95, R 11, W 4.

Site description: Scattered cultural material was recovered on the right bank upper terrace between Ing and Daphne Islands on the Athabasca River. The surface is thinly vegetated with poplar, some spruce and blueberry bushes.

Sampling: A surface survey along the terrace edge and the excavation of one small pit was accomplished.

Artifacts: Two split chert pebbles (one of black chert with unifacial retouch), a black chert uniface, large rectangular Beaver Creek quartzite flake and some core remnants comprise the artifacts exclusive of debitage (Plate VI).

Discussion: The variety and number of artifacts recovered, even with minimal testing, in this large open area suggests that further testing should be undertaken when appropriate. The large blade-like quartzite flake reflects good control over the material as well as the availability of large

nodules. The chert unifaces indicate that camps may have been present.

Hh0v 30

Location: 57°11'00" N. Lat. x 111°37'45" W. Long. U.T.M. 12VVU614377.

Site description: Site is a cleared parking lot above and behind the Little Arrow Cafe at Ft. Mackay.

Sampling: Survey was limited to approximately 5 minutes of surface collecting.

Artifacts: Thirteen thinning flakes of Beaver Creek quartzite were collected.

Discussion: Flake sizes range from 1 cm<sup>2</sup> to about 18 cm<sup>2</sup> and reflect ample availability of raw material. This terrace was the highest and furthest back of any we tested this summer.

Hh0w 3

Location: 57°18'40" N. Lat. x 111°40'30" W. Long. 12VVU594515, SE¼, NW¼, S 2, T 96, R 11, W 4.

Site description: A low alluvial terrace heavily vegetated by poplar, spruce and willow on the left banks of the Ells and Athabasca rivers left banks. About 20 m from the Ells and 25 m north of a winter road were the buried remains of a recent structure.

Sampling: Numerous small tests on both sides of the Ells and 2 1 m<sup>2</sup> tests at the cabin site were excavated.

Artifacts: Recent glass ware, wire nails and rusted cans were uncovered in the alluvial silt.

Discussion: Testing was undertaken in the hope of finding remains of MacKay or Old Red River post. The dense vegetation and rapidity with which silts accumulate make it difficult to find historic site remains without the aid of maps, augers and metal detectors.

Hi0v 1

Location: 57°24'30" N. Lat. x 111°38'15" W. Long. U.T.M. 12VVU617629, NW of NE¼, S 12, T 97, R 11, W 4.

Site description: Site is on an 8 m high terrace on either side of Fort Creek. The site extent is not known but appears restricted to either side of Fort Creek near the bluff edges. Poplar is the dominant vegetation.

Sampling: Sampling consisted of a surface survey along the bluff face and the excavation of five .25 m<sup>2</sup> tests.

Artifacts: Unifaces (f=5) occurred most frequently in the collection. A large dolomitic core tool, a smaller Beaver Creek quartzite core biface, a worked flake and some recent historic material as well as debitage were recorded (Plates VI, VII).

Discussion: Occupation seems to have concentrated on the terrace edge and may have consisted of an encampment(s). Tests at terrace edge yielded cultural material to a maximum of 35 cm below the surface.

Hi0v 2

Location: 57°25'10" N. Lat. x 111°38'002" W. Long. U.T.M. 12VVU617641, S½, NE¼, S 13, T 97, R 11, W 4.

Site description: The collapsed remains of a 10 x 10 m log structure and chimney on an 8 m high terrace on the Athabasca River. Vegetation is mainly poplar and grass.

Sampling: Surface survey only.

Artifacts: None collected.

Discussion: Cabin dates quite late on the basis on glass and metal found in association with it.

CLEARWATER-ATHABASCA RIVER SUMMARY

The Clearwater-Athabasca Rivers survey concentrated on upper terraces and 14 sites were recorded in 6 days. Low

alluvial terraces and islands were investigated initially but we soon stopped testing them because cultural material was not found. Recent cabins and early historic structural remains on the upper terraces are contemporary reminders of the significance these rivers have to settlement patterns.

Unifaces were the most frequently recovered artifact. Five were of Beaver Creek quartzite and seven of chert or other quartzite. Split pebble or cortex unifaces were present but not frequent. The virtual absence of use-retouch flakes is striking and led me to infer that either finished tools were preferred or many sites represent chipping stations only and not encampments. Core rejuvenation flakes, some quite large, are fairly common to this region and taken in conjunction with the absence of bipolar split pebbles on the Clearwater and Athabasca Rivers it seems clear that large cores were readily available. Unique artifacts were a unilateral biface made of a chert not previously noted by us, a dolomitic core tool exceptional for its form and material qualities, and a pebble fragment (Plate V) with two linear flake scars.

Beaver Creek quartzite was the most frequently recovered lithic material along the two rivers. Occasional fragments of it had undergone heat alteration but given the small number of recognizably altered pieces I assume that heating was more accidental than purposeful. Other quartzites were also noted but comprised only 6% of the raw material. An obvious difference in chert percentages was observed between Clearwater and Athabasca River sites, but inferences should be tempered by the small sample sizes on the Clearwater River.

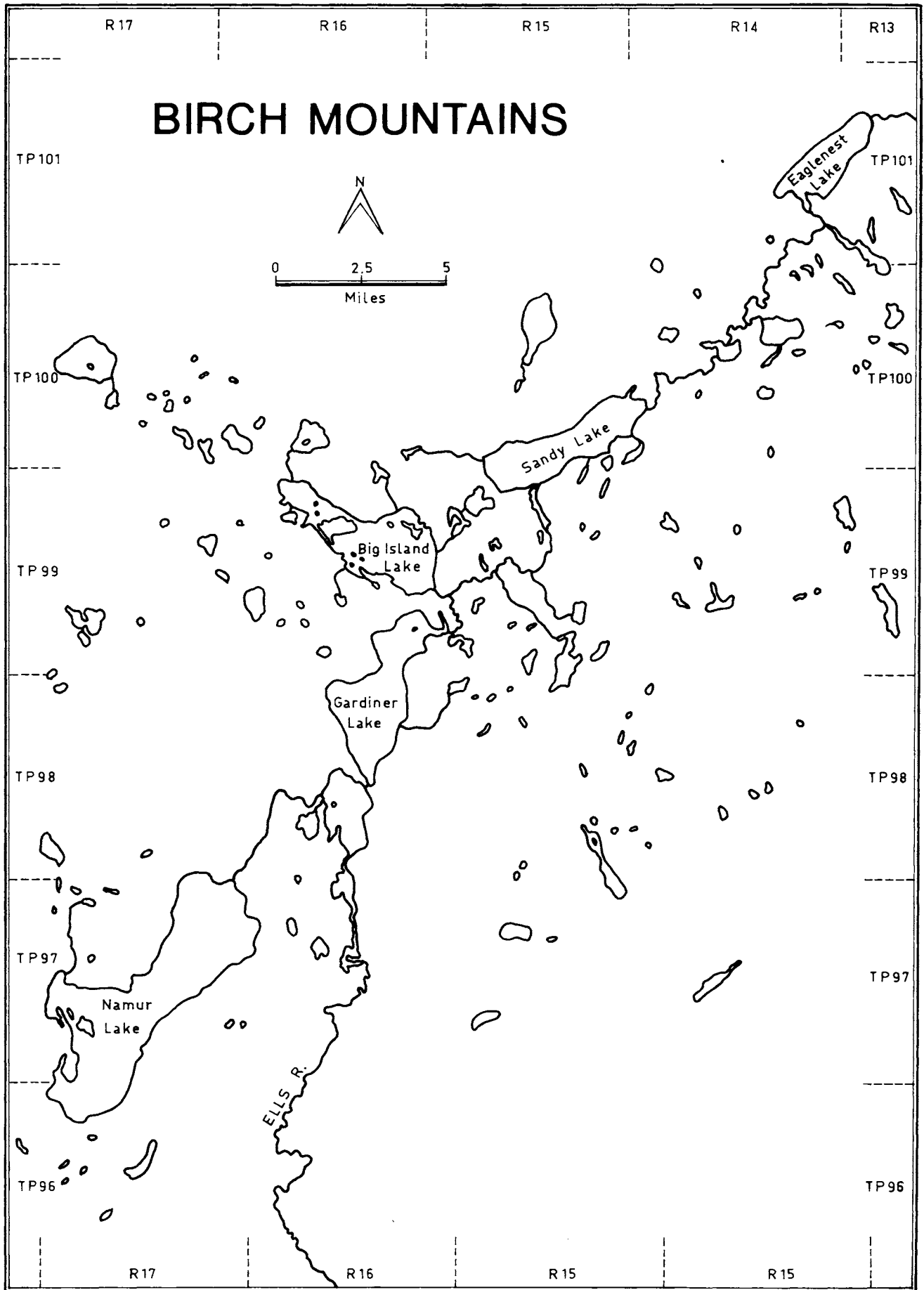


Figure 14

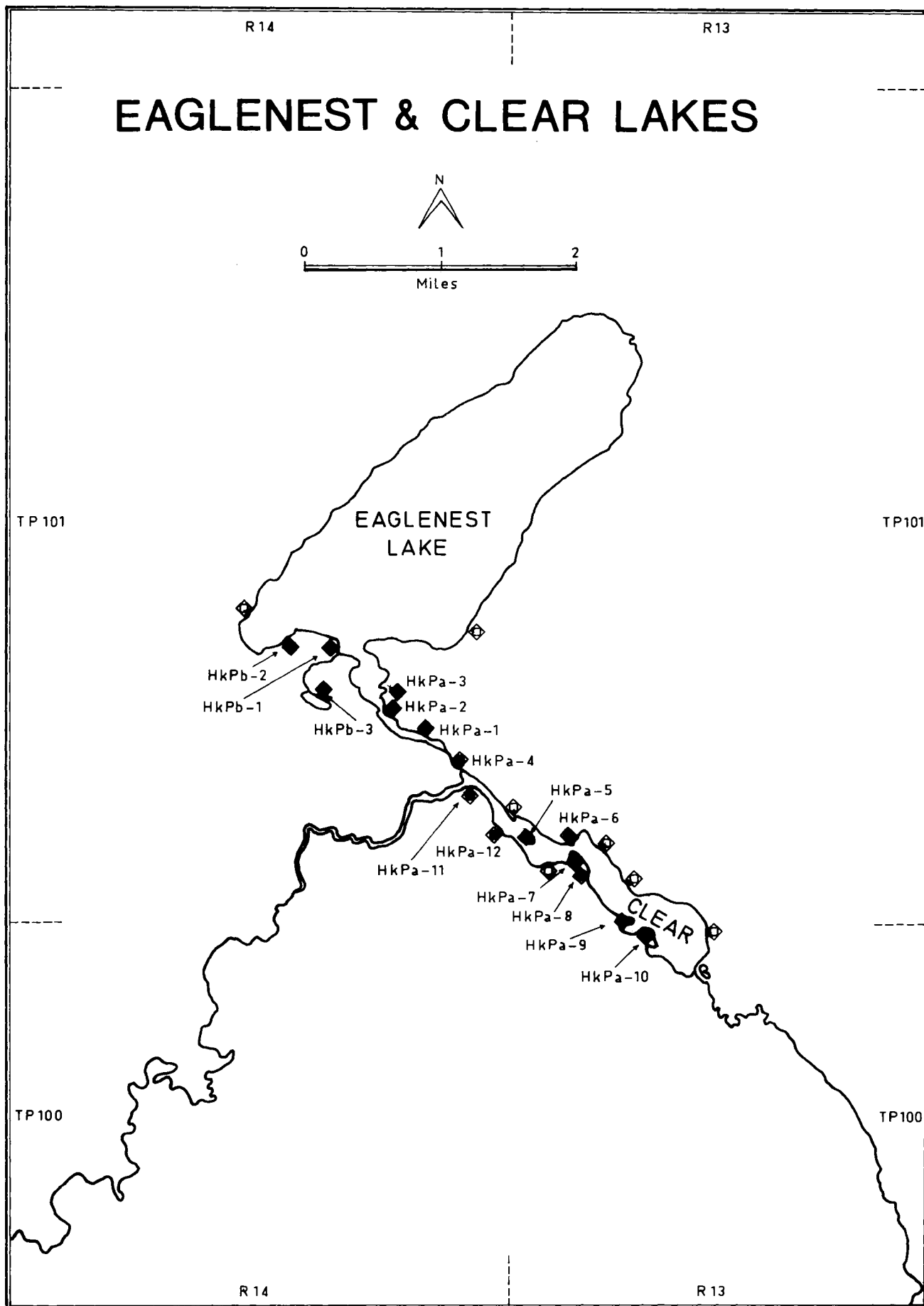


Figure 15

EAGLENEST LAKE

HkPa 1

Location: 57°44'58" N. Lat. x 112°04'20" W. Long. SE¼, S 12, T 101, R 14, W 4.

Site Description: This site is at the 2nd narrows on the low lying left bank of Eaglenest Lake drainage. Cultural material may extend the full length of the narrows. The area tested is about 25 m long and 25 m wide with a thin solum. Grass clearings are scattered through the mixed white spruce and birch upper storey. A thin cover of caribou moss and low bush cranberry comprise the ground cover. Ground surface rises slightly 20 - 30 m back from the waters edge.

Sampling: Site was surface surveyed and approximately 10 .25 m<sup>2</sup> tests were excavated. Upriver tests had a 2 cm thick A horizon and 3 - 5 cm powdery grey B horizon over a tan sand C horizon 7 - 9 cm below the surface while downriver the A horizon was 3 - 4 cm thick over a light grey-brown mottled soil (C horizon).

Artifacts: Most artifacts were recovered below surface to a maximum of 22 cm. Core remnants, shatter, thinning and retouch flakes were recorded in the frequencies 3:5:79:61. Dark grey quartzite was the favoured raw material at 97%. Artifacts included a black chert uniface fragment, 2 quartzite biface fragments, a gneissic biface fragment, battered core-flake, core-flake remnant and a retouched quartzite flake (Plate VIII).

Discussion: An ash-charcoal area with calcined bone occurred in one pit. This camp site was probably occasioned by the portage and fishing locality. Artifacts are not temporally or spatially diagnostic, but further research at HkPa 1 is recommended.

HkPa 2

Location: 57°45'06" N. Lat. x 112°09'52" W. Long. SW¼,  
S 12, T 101, R 14, W 4.

Site description: A spruce and moss covered area on the left bank of the 1st narrows on Eaglenest Lake drainage that is generally low and poorly drained. Ground slopes up to east where testing was accomplished.

Sampling: Only a small area was tested with about 7 .25 m<sup>2</sup> pits. Artifacts appeared at base of moss and the greyish B horizon.

Artifacts: Grey quartzite flakes were lightly scattered across the site area. One core remnant with hinge fracture scars and 14 thinning flakes were recovered.

Discussion: The site is probably part of a larger continuum extending the length of the left bank.

HkPa 3

Location: 57°45'06" N. Lat. x 112°09'52" W. Long. SW¼,  
S 12, T 101, R 14, W 4.

Site description: This site is situated on a low, but fairly well-drained pine covered ridge 100 m northeast of HkPa 2.

Sampling: Sampling consisted of "a lot of scraping around."

Artifacts: Five grey quartzite thinning flakes, some with battering, were recovered (Plate IX). None are diagnostic.

Discussion: This site is minimal and may represent chipping activity at one point in time.

HkPa 4

Location: 57°44'46" N. Lat. x 112°09'00" W. Long. NE¼,  
S 1, T 101, R 14, W 4.

Site description: This extensive and productive site is situated on a 7 m high flat glacio-fluvial terrace on the left bank of the 3rd narrows where the Eaglenest and Clear



Lake drainages combine and flow to Sandy Lake. The site is approximately 150 m long by 50 m wide. Vegetation is dominated by spruce with small grass or Cladonia clearings interspersed throughout. Soil is well-drained.

Sampling: Eleven tests (.25 m<sup>2</sup>) were excavated every 10 m on alternate sides of the trail paralleling the river and extending the site length. Five others were placed further back from the river to determine site width. Soil is grey wooded with a 1 - 3 cm organic horizon over a greyish eluvial zone (1 - 2 cm thick) above a rust orange sand/silt horizon. In some places a buried organic greyish eluvial horizon occurred. Flakes were often associated with the 2nd eluvial horizon.

Artifacts: Lithic raw materials included black chert, other cherts, dark and light grey quartzite (some of which is salt and pepper quartzite), heat treated quartzite and Beaver Creek quartzite. A possible welded tuff specimen sent to Jacques Cing-Mars for confirmation has been identified as such (see Cing-Mars 1973). Three complete projectile points and 2 fragments were excavated. One point (HkPa 4:14) of Beaver Creek quartzite is stemmed and the others are corner-notched. Two linear quartzite spalls are triangular in transverse section and have a series of hinge fractures on the dorsal-proximal surface. A cortex flake exhibits bipolar retouch. Of the two cortexed quartzite flakes, one is heat treated and the other has marginal bifacial retouch on the proximal half (Plate X).

Discussion: The welded tuff flake indicates direct or indirect interaction with the Keele River region along the Mackenzie River near Great Bear Lake, N.W.T. Retouch flakes, a large thinning flake and a stemmed point of Beaver Creek quartzite suggest that large nodules of this material were brought to the area; however, infrequent occurrence of this material argues against transport of large amounts of it. Projectile points include straight stemmed, corner and side-notched forms similar to those associated with early

Tattheilei (A.D. 300-500), Pelican Lake (1300 B.C. - A.D. 0) and late Taltheilei (A.D. 1100 - 1500). Historic artifacts included window glass and metal probably associated with the remains of one, possibly two, cabins on the site. Light charcoal scatter was uncovered, but no hearths were delimited.

#### HkPb 1

Location: 57°45'30" N. Lat. x 112°10'25" W. Long. NE¼, S11, T 101, R 14, W 4.

Site description: Site is situated 3 m above Eaglenest Lake on a well-drained open terrace near the outlet at the south end of the lake. Vegetation includes small bushes, spruce and occasional willows to the north and a dense poplar growth to the south. On the east is a marsh and to the west lies the lake. Site covers about 250 m<sup>2</sup>.

Sampling: Random tests of .25 m<sup>2</sup> were initially placed to determine site potential. Following this three transects were aligned in triangular fashion and pits excavated at various intervals along them. Twenty-three of 30 pits produced cultural material.

Artifacts: Shatter, thinning and retouch flakes occurred in the frequencies 12:441:32. The predominant raw material was quartzite (92%), Beaver Creek quartzite was a distant second (3.8%). Artifacts included 4 unifaces, 5 retouched flakes, a wedge-like quartzite specimen with crushed "keel", 2 linear flakes, 3 core remnants, a "chi-tho" and 1 side-notched quartzite point estimated to date late middle prehistoric (Plate XI).

Discussion: HkPb 1 is the only known large site on Eaglenest Lake and as such merits further testing. Other large sites occur on the lake drainage.

#### HkPb 2

Location: 57°45'28" N. Lat. x 112°11'00" W. Long. NW¼, S 11, T 101, R 14, W 4.

Site description: Site is situated on a dry flat 25 m wide hilltop about 600 m west-south-west of HkPb 1 on the south end of the lake. Vegetation includes lichen, lowbush cranberry, jackpine and spruce. Sand forms the soil base.

Sampling: Five .25 m<sup>2</sup> pits were randomly excavated.

Artifacts: Eleven flakes (1 shatter and 10 thinning) were recovered approximately 3 - 5 cm below the surface in the B horizon of 2 pits. No features were recorded.

Discussion: Considering the physical situation and small sample size this is probably a lookout station at which some chipping was accomplished.

### HkPb 3

Location: 57°45'14" N. Lat. x 112°10'40" W. Long. T 101, R 14, W 4.

Site description: An approximately 30 m high rounded hill located near the lake outlet but back from the shore. Vegetation includes spruce, aspen, jackpine, low bush cranberry, Cladonia and grass. The glacio-fluvial soil is well-drained.

Sampling: Three .25 m<sup>2</sup> tests were placed on the hilltop and 5 flakes recovered. A charcoal bearing grey horizon below the A horizon is considered indicative of natural burning rather than cultural.

Artifacts: Five quartzite flakes (4 non-retouched and 1 uniface) were uncovered. The uniface is incomplete.

Discussion: In view of the uniface fragment and location near the lake, it is possible that this sparse site served as a short term camp.

### EAGLENEST LAKE SUMMARY

Eaglenest Lake and drainage was the smallest water body surveyed in this field season, but was also the most important. Seven sites were recorded and three (HkPa 1,

HkPa 4, HkPb 1) are spatially extensive and sufficiently productive to merit further testing. Sites ranged from 250 - 7500 m<sup>2</sup> in extent and were usually located on well-drained areas back from the shoreline along Eaglenest drainage. Quartzite forms the favoured raw material (F=837 or 88%). Small to medium size stemmed, corner-notched and side-notched projectile points, unifaces, bipolar remnants, as well as flakes and historic items were recorded. Thinning flakes, some quite large, constitute 84% of the debitage. No definite features were noted, however.

#### Clear Lake HkPa 5

Location: 57°44'18" N. Lat. x 112°08'00" W. Long. T 101, R 13, W 4.

Site description: An island at the northwest end of Clear Lake on which black spruce, jackpine and thick moss grow toward the centre and low bush cranberry on the margins. Soil horizons include a thick woody A (10 cm thick), a pebbly grey sand B and a tan coloured sand.

Sampling: At the south end of the island three test pits .50 m<sup>2</sup> were trowel excavated and an exposed bank surveyed.

Artifacts: A single biface thinning flake of dark grey quartzite was recovered (Plate IX).

Discussion: Vegetation and drainage did not facilitate further testing, but it is unlikely that it would have been productive.

#### HkPa 6

Location: 57°44'17" N. Lat. x 112°07'40" W. Long. T 101, R 13, W 4.

Site description: Site is on flat 25 x 30 m terrace approximately 3 m above lake level at a narrows on the west end of Clear Lake. Terrace is separated from the lake by about 15 m of low boggy ground. North of the clearing the

vegetation becomes boggy and black spruce dominates.

Sampling: Five tests approximately .25 m<sup>2</sup> were excavated and the clearing surface surveyed. Cultural material occurred mainly in the B horizon 3 - 12 cm below the surface.

Artifacts: A battered hammerstone, core remnant(?), stemmed biface (HkPa 6:13), uniface fragment and core rejuvenation(?) flake were recovered (Plate IX). Thinning flakes comprise the bulk of debitage.

Discussion: In view of the location and associated artifacts this may well have been a campsite. Further testing may be productive if done in conjunction with a larger project.

#### HkPa 7

Location: 57°44'14" N. Lat. x 112°08'00" W. Long. T 101, R 13, W 4.

Site description: Site is on the south side of the same narrows on a low ridge 5 - 7 m above lake level. Vegetation consists of grass, moss, Ledum sp., aspen and spruce. Most of the ridge and slope is fairly open.

Sampling: Three .25 m<sup>2</sup> tests were troweled into sand A and B horizons. Most flakes were found at contact between the horizons but some occurred below it.

Artifacts: No diagnostic items were recorded.

Discussion: Site was possibly an occasional camp/lookout.

#### HkPa 8

Location: 57°44'08" N. Lat. x 112°07'25" W. Long. T 101, R 13, W 4.

Site description: A series of successively higher slopes, the lowest one of which is 10 m above the lake, form part of a ridge on the south side of Clear Lake. An area east of the narrows was fairly open with a low bush cranberry and spruce cover in the clearing, surrounded by dense poplar and spruce.

Sampling: A total of four .25 m<sup>2</sup> tests were excavated on three open terraces, the lower two of which yielded flakes.

Artifacts: Four small thinning flakes were recovered.

Discussion: These terraces were minimally utilized.

HkPa 9

Location: 57°43'48" W. Lat. x 112°06'45" W. Long. T 101, R 13, W 4.

Site description: A well-drained low linear ridge about 4 - 5 m x 25 - 30 m elevated roughly 1 m above the southwest end of Clear Lake. The remainder of the peninsula is low and wet. Vegetation includes jackpine, lowbush cranberry, spruce and Ledum.

Sampling: Two .25 m<sup>2</sup> test pits were excavated into the thin sandy soil.

Artifacts: Two thinning flakes of Beaver Creek quartzite were found in the grey sand-gravel B horizon at 3 cm below the surface.

Discussion: This ridge does not appear to have been frequently utilized.

HkPa 10

Location: 57°43'40" W. Lat. x 112°06'30" W. Long. T 100, R 13, W 4.

Site description: A broad terrace 3 m above lake level on the southwest end of Clear Lake on the south side of a bay. Jackpine predominates on this well-drained sandy terrace. Spruce occurs along the shore and Ledum and low bush cranberry within the clearing.

Sampling: Six .25 m<sup>2</sup> tests were excavated.

Artifacts: One quartzite thinning flake was recorded.

Discussion: At first glance this terrace looked to be an ideal site location because of terrain, drainage and vegetation, but others did not recognize the potential.

HkPa 11

Location: 57°44'32" N. Lat. x 112°08'45" N. Long. T 101, R 14, W 4.

Site description: Site is on a high hill or ridge southeast of HkPa 4 on the left side of Clear Lake drainage where it merges with Eaglenest drainage. The surface slopes in all directions offering little or no flat area for a camp. Spruce, pine, poplar, low cranberry, caribou moss and grass are present.

Sampling: Two .25 m<sup>2</sup> tests were excavated about 8 m apart in the shallow soil on top the hill. Two sterile .25 m<sup>2</sup> pits were excavated at the base of the hill.

Artifacts: A side to corner-notched biface (HkPa 11:1) and 2 small quartzite thinning flakes were recovered (Plate IX).

Discussion: Location of the site and the small artifact yield suggests that this be limited to a lookout site.

HkPa 12

Location: 57°44'20" N. Lat. x 112°08'25" W. Long. T 101, R 14, W 4.

Site description: Site is on west shore of Clear Lake at crest of a low (4 m) hill, part of a ridge paralleling this shore. An open area approximately 7 x 16 m has jackpine and some aspen associated. Ground cover on the sandy soil includes lichen, low bush cranberry, rose and a creeping succulent.

Sampling: Three .25 m<sup>2</sup> pits were excavated.

Artifacts: Five non-retouched quartzite flakes and a mudstone (?) fragment were uncovered at 12 cm below the surface in the brown silt C(?) horizon. Three flakes are of "salt and pepper" quartzite.

Discussion: It is uncertain what function this location may have served but a lookout/chipping station seems most probable considering the physical situation and debitage forms present.

## CLEAR LAKE SUMMARY

Eight sites were recorded by 4 people in a one day survey. Clearly, this is a high ratio in terms of energy expended and represents a dense concentration of sites on the limited shoreline. No site is, however, particularly significant by itself. Most consisted only of light flake scatter, two yielded formed bifaces similar to specimens from the Eaglenest Lake drainage. Quartzite comprises 95% of the raw material utilized. Clear Lake was repeatedly utilized and temporary camps occurred, but camps of extended duration appear to have been restricted to the Eaglenest Lake drainage.

## SANDY LAKE

### HjPb 1

Location: 57<sup>0</sup>39'38" N. Lat. x 112<sup>0</sup>17'50" W. Long. T 100, R 14, W 4.

Site description: About 400 m south of inlet to Sandy Lake from Eaglenest Lake is a fairly low storm-tossed stoney beach fronted by willows and bushes. Behind the beach ridge is a 100 m long by 20 - 30 m wide terrace with open jackpine and spruce vegetation. Further back young aspen grow.

Sampling: Six .25 m<sup>2</sup> tests were excavated and cultural material found 5 - 10 cm below the surface in a grey sandy B horizon to the front of the wide terrace.

Artifacts: Eighteen non-retouched thinning flakes were recovered.

Discussion: This terrace was not heavily utilized in the past.

### HjPb 2

Location: 57<sup>0</sup>38'50" N. Lat. x 112<sup>0</sup>20'00" W. Long. T 99,



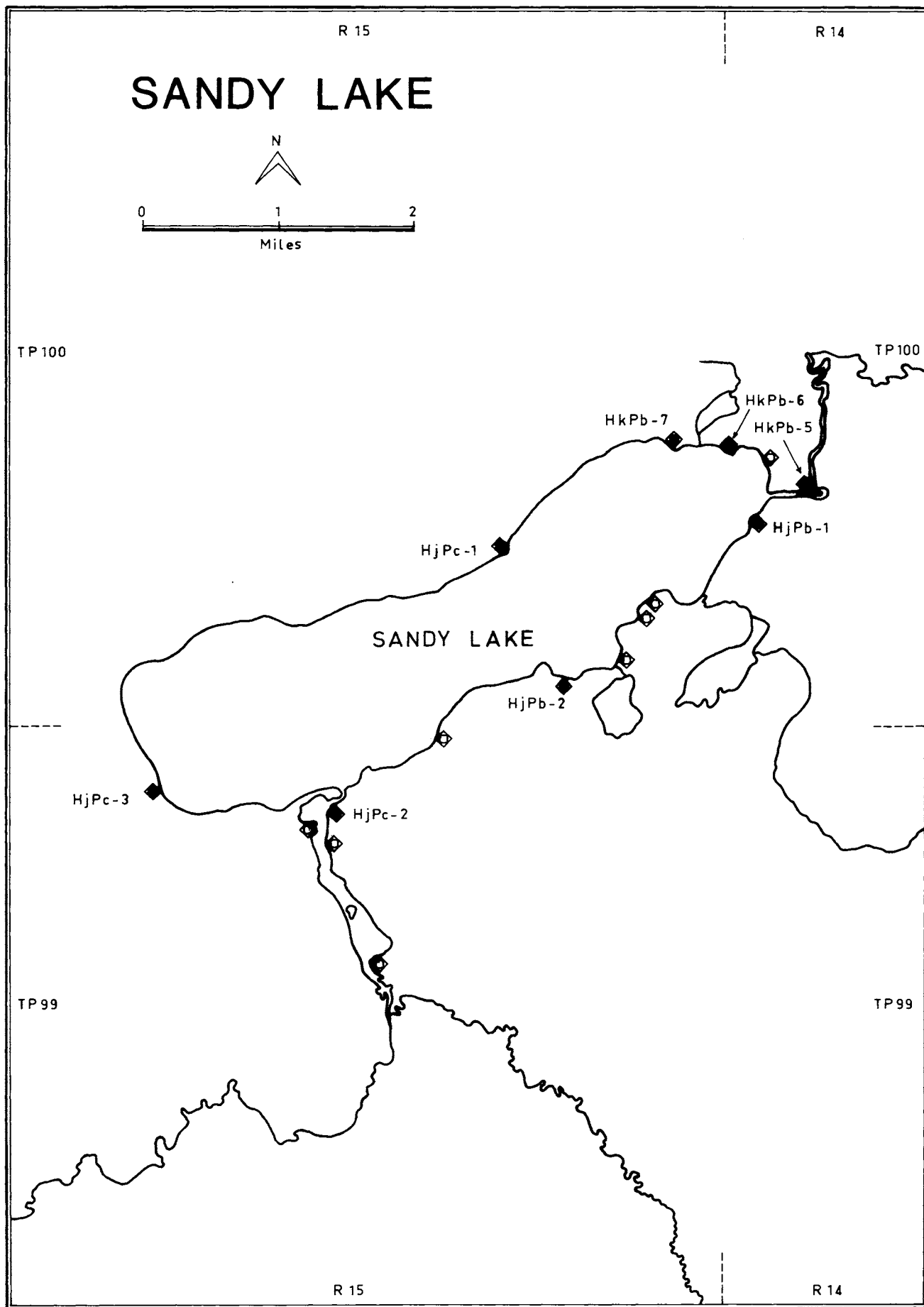


Figure 16

R 15, W 4.

Site description: A series of 10 parallel sandy beach ridges about 80 m long by 112 m deep are located in an enbayment midway along the south shore of Sandy Lake. Vegetation is primarily jackpine and Cladonia.

Sampling: Each ridge was surface surveyed and tested by one or more .25 m<sup>2</sup> pits.

Artifacts: On the rear most ridge, five flakes, one of which may be cultural, were recovered.

Discussion: This location appeared to offer excellent facilities to past campers, but they chose not to enjoy them.

#### HjPc 1

Location: 57°39'40" N. Lat. x 112°20'44" W. Long. T 100, R 15, W 4.

Site description: A well-drained flat sandy area, partially cleared, midway on the north shore of Sandy Lake. Vegetation in clearing includes grass, rose, small spruce and poplar. Poplar also occurs on the adjoining hillside and jackpine on a non-cleared area toward the lake.

Sampling: In the cleared and jackpine areas 4 small tests were excavated and a surface survey accomplished. One test at the base of the hill yielded 3 flakes in a grey sand 6 cm below the surface.

Artifacts: Three thinning flakes of which 2 are black chert.

Discussion: A sparsely utilized locality.

#### HjPc 2

Location: 57°37'58"N. Lat. x 112°23'00" W. Long. T 99, R 15, W 4.

Site description: On the northeast side of a small lake through which Sandy Lake drains is a high jackpine, birch, white spruce, moss and Ledum covered ridge overlooking both lakes.

Sampling: Of the nine .25 m<sup>2</sup> test pits excavated only 2 contained cultural material. Most items were 4 - 6 cm below surface in the B horizon.

Artifacts: Only non-retouched flakes of quartzite, chert and quartz were recovered.

Discussion: That only 2 spatially separated pits contained material suggests 2 separate concentrations. It is possible that this locality could yield distinct horizontal distributions.

### HjPc 3

Location: 57°38'12" N. Lat. x 112°24'55" W. Long. T 99, R 15, W 4.

Site description: At the west end of Sandy Lake at the portage to Big Island Lake is a small sandy beach with a low (3 m) sandy terrace behind it. Vegetation is predominantly spruce and some jackpine. Cladonia, Ledum and lowbush cranberry form the undergrowth.

Sampling: Eight .25 m<sup>2</sup> tests were excavated on the beach and low terrace. Virtually all contained cultural material. Soil horizons include an A (0 - 3 cm), a gray gravelly and gray sandy B (3 - 19 cm) and a clayey C horizon.

Artifacts: Included are a utilized large quartzite flake fragment, a possibly bipolar split cortexed black chert flake and a clear glass fragment as well as miscellaneous quartzite thinning and retouch flakes (Plate IX).

Discussion: Cultural material is fairly evenly scattered across this site indicating it may have been occupied numerous times in the past. No features were noted.

### HkPb 5

Location: 57°40'10"N. Lat. x 112°17'25" W. Long. T 100, R 14, W 4.

Site description: A 56 m wide by 50 m long jackpine,

Cladonia, lowbush cranberry, and rosebush vegetated terrace elevated 3 m above lake level. Clearing is situated on right bank about 350 m above inlet to Sandy Lake. A cutline delimits the western extent of the site and part of this well-drained terrace has been bulldozed. The thin soil is predominantly sand.

Sampling: Seven .25 m<sup>2</sup> pits were excavated toward the centre and margins of the clearing. A surface collection was also gathered.

Artifacts: A fragmented biface and a blade-like flake of Beaver Creek quartzite(?) were surface collected (Plate IX). Except for one chert flake all other debris was of quartzite.

Discussion: We expected to find a greater density of cultural remains considering the location, drainage and present vegetation but artifacts were scarce.

#### HkPb 6

Location: 57°40'20"N. Lat. x 112°18'00" W. Long. T 100, R 14, W 4.

Site description: At the northeast shore of Sandy Lake on a southwest facing beach and associated ridge occur spruce, jackpine, rose and Cladonia. A jackpine clearing is east of the beach and spruce covered ridge. The shallow soil is based on a glacio-fluvial parent material.

Sampling: Numerous small to .25 m<sup>2</sup> tests were placed in the spruce and jackpine areas, but only the former yielded cultural material.

Artifacts: Thinning and retouch flakes were recovered. Two quartzite flakes are large enough that ample cores need be assumed.

Discussion: The spruce covered ridge may have occasionally been the site of a chipping station.

#### HkPb 7

Location: 57°40'24" N. Lat. x 112°18'50"W. Long. T 100,

R 15, W 4.

Site description: A west facing sand beach ridge backed by a low lying, poorly drained area on the northeast shore of Sandy Lake. Sand ridge vegetation includes Cladonia, grass and some spruce. The low lying area behind it is mainly black spruce and moss covered.

Sampling: Surface survey and 4 .25 m<sup>2</sup> tests were accomplished. A discontinuous A horizon occurs about 27 cm below the surface. Cultural material was recovered on the surface only.

Artifacts: A corner-notched point (HkPb 7:1) and 6 quartzite flakes were recorded (Plate IX). One flake is of sufficient size (49 x 39 mm) that a large core must be assumed.

Discussion: This beach ridge was sparsely utilized. No cultural features were noted and although camps may occasionally have been located here, the area does not merit further research. The point best compares with Pelican Lake points.

#### SANDY LAKE SUMMARY

It does not appear that Sandy Lake was frequented in the past as only eight sites represented by light scatterings of cultural material were recorded in 16 stops. Most were beach sites. Quartzite comprised 88% of the lithic material. That the second most important lithic was black chert (8.8%) is rather striking given its low percentage at Eaglenest Lake and absence at Clear Lake. Large quartzite cores were probably available as indicated by some thinning flakes. The single blade-like flake (HkPb 5:1) is intriguing but little may be inferred at this time due to lack of supportive data. A bipolar core preparation technique may be present. Of the two bifaces recorded one (HkPb 7:1) is complete and best compared with Pelican Lake.

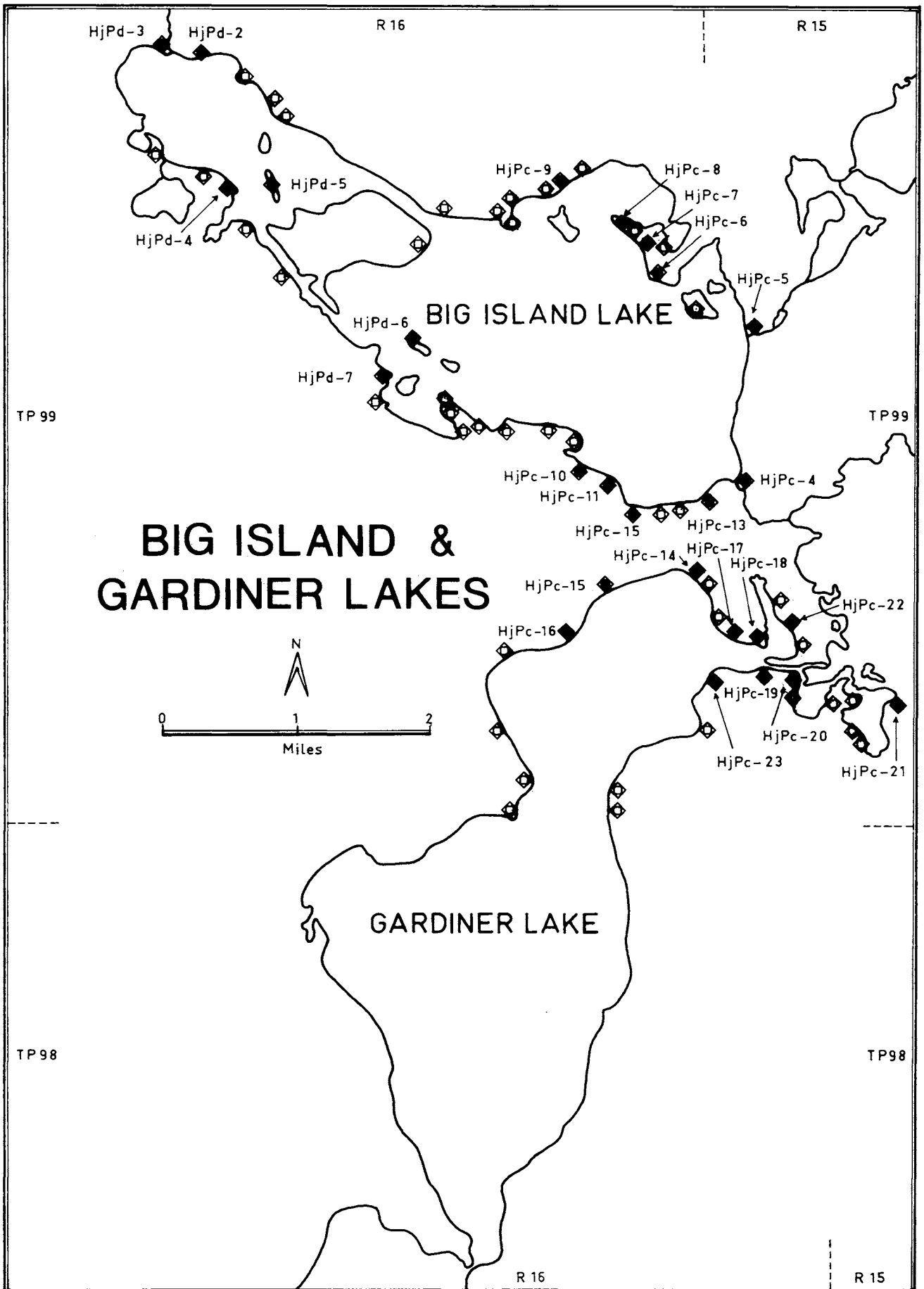


Figure 17

BIG ISLAND LAKE

HjPc 4

Location: 57°35'30" N. Lat. x 112°27'30" W. Long. T 99, R 15, W 4.

Site description: The outlet of Big Island Lake marks the south end of this site scattered along a low 65 x 15 m grass covered gravel beach on the southeast end of the lake. Willows occur along the site margin.

Sampling: Six 1 m<sup>2</sup> and 4 .25 m<sup>2</sup> pits were excavated to sterile soil in the shallow deposits. Strata usually consisted of a grass mat on gravel, but deposits were deeper (8 cm below surface) toward the south.

Artifacts: Quartzite is the predominant raw material. Chert, quartz and Beaver Creek quartzite are poorly represented. Historic artifacts include wire nails, a suspender buckle, a metal button, and a quantity of seed beads. Thick scrapers, point fragments, bipolar fragments and larger retouch flakes comprise the lithic items. One flake uniface (HjPc 4:24) possibly of heat treated chert exhibits a great deal of wear polish (Plate XII).

Discussion: This open site is in a favourable location for either river or overland access to Big Island Lake and may have served as a fish camp and departure point. A charcoal concentration dated 3610 ± 120 B.P. (RL-533) was in a cultural depression associated with artifacts at 30 cm below the surface. Densest debitage distributions were recorded toward the rear of the site. The association of early material and historic artifacts indicates that this site was intermittently occupied over an extensive period and, for this reason, merits further attention.

HjPc 5

Location: 57°36'26" N. Lat. x 112°27'25" W. Long. T 99, R 15, W 4.

Site description: The portage from Sandy Lake leads to this terrace site on the east end of Big Island Lake. The small bluff is 5 - 7 m above lake level and has a moderately flat 10 x 20 m surface beyond which the surface steeply slopes. Spruce dominates the vegetation. Poplar, lichen, grass and moss were also noted. Soil horizons include a 0 - 3 cm humus, 3 - 20 cm light grey sandy silt B and a glacio-fluvial C horizon.

Sampling: Five .25 m<sup>2</sup> and 2 1 m<sup>2</sup> tests were excavated to sterile. Only two flakes occurred in surface slope wash.

Artifacts: Grey and rosy quartzite were the favoured raw materials at this site. A core remnant and 2 unifaces are of the former, and 1 large core biface and leaf-shaped biface of the latter. A black chert specimen may be a bipolar flake remnant with light unifacial retouch at one end (Plate XIII).

Discussion: Most artifacts were associated with a light grey sandy-silt horizon. The large core biface is probably best related to similar items found in the transitional forest, e.g., at La La Biche (McCullough pers. comm.). This site was reasonably well-tested but further limited research may be worthwhile.

#### HjPc 6

Location: 57°36'46" N. Lat. x 112°28'35" W. Long. T 99, R 16, W 4.

Site description: The site consists of a thick spruce and poplar upper story and moss ground cover on a bluff surface 3 m above water on a south facing arm at the northeast end of Big Island Lake.

Sampling: Most lithic items are from the slope surface. Two .25 m<sup>2</sup> test pits were excavated near the face.

Artifacts: A unifacially retouched quartzite cortex spall and other flakes, most of different quartzite, were recovered (Plate XIV).



Discussion: The end struck cortex spall (HjPc 6:1) is intentionally retouched on 2 edges. Although not worth further testing this small site was fairly productive.

HjPc 7

Location: 57°37'00" N. Lat. x 112°28'44" W. Long. T 99, R 16, W 4.

Site description: On a southwest facing arm at the northeast end of Big Island Lake a beach and 5 - 7 m high bank are associated. Spruce is dominant with some birch undercover. Heavy moss is present on the flat bluff top and grass appears on the slope.

Sampling: One .25 m<sup>2</sup> test was excavated and the cut bank face surface collected.

Artifacts: Three flakes, one use-retouched, of three different lithic materials were on the slope surface. A Beaver Creek quartzite fragment may be part of a biface.

Discussion: The altered Beaver Creek item may be a biface fragment, or part of a bipolar core.

HjPc 8

Location: 57°37'10" N. Lat. x 112°29'00" W. Long. T 99, R 16, W 4.

Site description: A slumpage slope on a peninsula at the northeast end of the lake. The terrace top is about 7 m above lake level. Vegetation includes mature spruce interspersed with grass.

Sampling: Surface survey of the slope wash.

Artifacts: Two small flakes of Beaver Creek quartzite, one of which was subsequently lost.

Discussion: Site does not lend itself to verbosity.

HjPc 9

Location: 57°37'24" N. Lat. x 112°29'44" W. Long. T 99, R 16, W 4.

Site description: A low storm tossed ridge and erosion face on which grows spruce, poplar and low bush cranberry.

Sampling: Surface survey and the excavation of two small test pits.

Artifacts: A shouldered biface and flake, the latter lost (Plate XIV).

Discussion: Both items were found on the surface. The biface is not considered diagnostic.

HjPc 10

Location: 57°35'44" N. Lat. x 112°29'34" W. Long. T 99, R 16, W 4.

Site description: A hill on the south side of Big Island Lake, east half, with an excellent view of the lake. Vegetation is open with young jackpine, Ledum, and low bush cranberry.

Sampling: Two .25 m<sup>2</sup> tests were excavated.

Artifacts: Two retouch flakes, one of black-grey chert and one of quartzite, were recovered.

Discussion: Flint knappers did not take advantage of the view.

HjPc 11

Location: 57°35'28" N. Lat. x 112°29'00" W. Long. T 99, R 16, W 4.

Site description: A low round hill about 3 m above water on a point at the southeast end of Big Island Lake. Vegetation included young spruce, aspen and jackpine.

Sampling: Four small tests of .25 m<sup>2</sup> each were excavated.

Artifacts: A single quartzite flake.

Discussion: Site does not merit further discussion.

HjPc 12

Location: 57°35'18" N. Lat. x 112°28'46" W Long. T 99, R 16, W 4.

Site description: North slope of poplar hill separating Gardiner and Big Island Lake and about 1 km west of outlet.

Sampling: Two .25 m<sup>2</sup> tests.

Artifacts: One quartzite flake.

Discussion: Previous interpretations of North American pre-history will not be altered by this site.

### HjPc 13

Location: 57°35'22" N. Lat. x 112°28'00" W Long. T 99, R 16, W 4.

Site description: A beach and series of sand ridges about 100 m long and 14 m deep at the southeast end of the lake. Five to 6 ridges are present. Site is situated at the terminus of portage to Gardiner Lake. Vegetation consists of occasional willow, Ledum, aspen and grass. The low-lying sandy soil is well drained.

Sampling: A surface survey was accomplished and 15 .25 m<sup>2</sup> tests excavated up to 20 cm below the surface. All ridges and areas between them were sampled.

Artifacts: The favoured raw material was quartzite of which some are either humic stained or heat altered. Artifacts included 2 biface fragments, a uniface, large blade-like flake, possible core and 6 retouched flakes (Plate XV). None of the items is considered diagnostic.

Discussion: Ridges and flats furthest from the water were most productive. No features were noted and, given the small sized test pits, no lithic clusters were recorded. Some tests, however, contained higher percentages of material indicating spatially distinct activity foci. It is not known if they are also temporally distinct. The most probable reason for camps being here, other than subsistence procurement, is the portage to Gardiner Lake. This is further supported by the other two most important sites on this lake being in similar situations.

HjPd 2

Location: 57°38'14" N. Lat. x 112°33' 48" W. Long. T 99, R 16, W 4.

Site description: West of an intermittent stream on the north-west end of Big Island Lake is a 3 m high face with blowouts and a small sloping top surface. The soil is a well-drained silt on which incredibly dense young spruce grow. Needles and occasionally moss appear under the trees.

Sampling: A surface collection was made and 2 .25 m<sup>2</sup> test pits excavated.

Artifacts: Two thinning flakes were surface collected and a uniface was recovered 2 cm below the surface. All are of quartzite.

Discussion: It is most likely that this site was infrequently occupied. The dense vegetation prohibited further testing.

HjPd 3

Location: 57°38'15" N. Lat. x 112°34'00" W. Long. T 99, R 16, W 4.

Site description: West of HjPd 2 on Big Island Lake is a point of land with a terrace 2 - 3 m high. Vegetation includes black spruce and birch. Ground cover is moss and grass with a light scatter of needles.

Sampling: Two .25 m<sup>2</sup> tests were excavated. Cultural material occurred 5 - 15 cm below the surface in a silty alluvial soil.

Artifacts: Only flakes, most of quartzite, and a possible quartz core were recorded.

Discussion: Both tests contained cultural material 5 - 15 cm below the surface. Calcined bone occurred at 7 cm b.s. The site probably contains much more data, but we were unable to test further. The alluvial silt is similar to that at HjPd 2 and may be the result of spring flooding from lakes to the north.

HjPd 4

Location: 57°37'22" N. Lat. x 112°33'38" W. Long. T 99, R 16, W 4.

Site description: On the southwest end of Big Island Lake is a southeast trending peninsula encompassing a large surface area. As evidenced by the immature jackpine and low bush cranberry growing on higher sandy soil a forest fire occurred there not too long ago.

Sampling: Three .25 m<sup>2</sup> tests were excavated.

Artifacts: One quartzite thinning flake.

Discussion: As testing and recovery were minimal this site may yet contain further data; however, the location does not appear particularly favourable and further testing is not recommended.

HjPd 5

Location: 57°37'24" N. Lat. x 112°33'06" W. Long. T 99, R 16, W 4.

Site description: An elongated island northwest of Big Island Lake is dominated by spruce. A ground cover of thick peat and roses made testing difficult. On the island is an abandoned trapper's cabin and ground cache.

Sampling: Two .25 m<sup>2</sup> tests were excavated.

Artifacts: One retouched flake.

Discussion: Precluded by lack of data.

HjPd 6

Location: 57°36'22" N. Lat. x 112°31'30" W. Long. T 99, R 16, W 4.

Site description: Southeast of Big Island is a smaller one covered by mature spruce and a dense undergrowth of rose, raspberry and other bushes as well as tall dense grass. The

island humps appreciably toward the centre.

Sampling: Two .25 m<sup>2</sup> tests on either side of the centre were excavated.

Artifacts: One retouched flake of Beaver Creek quartzite was recovered.

Discussion: The single flake was found 10 - 12 cm below the surface in the B horizon. An undated hearth scatter was immediately below surface.

#### HjPd 7

Location: 57°36'09" N. Lat. x 112°31' 48" W. Long. T 99, R 16, W 4.

Site description: a 3 - 4 m high terrace and point of land southeast of the large island and near a small stream has a Ledum, moss, immature jackpine, birch and spruce vegetation.

Sampling: Five .25 m<sup>2</sup> tests were excavated and each of 3 possible terraces sampled.

Artifacts: A quartzite flake and a uniface were recorded (Plate XIV).

Discussion: Testing was made difficult by the vegetation, but it appears that at least one short term camp was present.

#### BIG ISLAND LAKE SUMMARY

The total shoreline of this lake was sampled at appropriate locations and 16 sites recorded. Most (f=12 or 75%) yielded extremely little cultural material, but three (HjPc 4, 5, 13) contained substantial evidence for prehistoric occupations. Two of the three were on beaches and all offered easy access to contiguous lake basins. Terrace or bluff situations were favoured campsites.

Dark grey, rosy, and salt and pepper quartzites were used. Beaver Creek quartzite was scarce although substantial thinning

flakes indicate that nodules or preforms were brought to the area. Cherts represented only 9.8% of the lithics. On Big Island Lake more quartz was utilized than on the other lakes, but it still constituted only a small percentage of the total lithic sample.

Lithic artifacts ranged from crudely flaked bifaces and unifaces to well-executed, thin, symmetrical specimens. Blade fragments of bifaces, roughly shaped bifaces, a cortex spall uniface, thick and thin unifaces, a large core biface and blade-like flake were recovered. Late Historic artifacts were found at one site and serve to indicate how rarely any historic items are found in the Birch Mountains.

#### GARDINER LAKE

HjPc 14

Location: 57°34'52" N. Lat. x 112°28'04" W. Long. T 99, r 16, W 4.

Site description: A low lying flat sandy area 80 x 47 m with 7 - 8 beach ridges was located at the north end of Gardiner Lake on the portage from Big Island Lake. Vegetation includes cranberry, blueberry, Cladonia, "British soldier" and lichen. Terrace 1 at the rear of the site is 2 m above lake level. Soil is sandy and has a 0 - 4 cm organic horizon, a 4 - 12 cm below surface charcoal speckled dark grey sand and a bottom grey sand.

Sampling: Five 1 m<sup>2</sup> and 21 .25 m<sup>2</sup> tests were excavated and a surface survey made. All ridges were tested.

Artifacts: Included are a side-notched concave base point, 2 thumbnail unifaces, 2 medium-sized unifaces, a cortex spall tool and a flaked pebble core (Plate XVI).

Discussion: Most interesting and problematic of the artifacts is the point. Comparisons have included Bitterroot, Oxbow and Besant. The only unanimity is that the point is poorly made

and of a chert material not noted elsewhere this summer. The unifaces, spall tool and pebble indicate camp(s). All but one flake on ridge 3 came from ridges 4 and 5 toward the front of the site. Quartzite, including salt and pepper quartzite, occurs most frequently.

HjPc 15

Location: 57°34'46" N. Lat. x 112°29'08" W. Long. T 99, R 16, W 4.

Site description: A 2 m high rise above water along the northwest shore of Gardiner Lake. Minimum areal extent of terrace is 50 by 10 m and may incorporate the entire point. Vegetation is a fairly open growth of poplar, spruce, Ledum, rose, cranberry, Cladonia and grass. Soil consists of a 4 - 8 cm Sandy A, a dark charcoal bearing 3 cm thick B, and a grey sandy C.

Sampling: Five .25 m<sup>2</sup> and a 1 m<sup>2</sup> tests were excavated.

Artifacts: Five quartzite flakes of which one is linear.

Discussion: The linear flake with a single dorsal ridge was originally thought a good candidate for a microblade. Further testing failed to uncover similar flakes and closer analysis of the one indicates no platform preparation and a lipping form indicative of an oblique angle impact.

Site description: A 3 m high rounded point of land on the northwest shore of Gardiner Lake. Vegetation includes poplar, some spruce, and an undergrowth of young poplar, low bush cranberry, moss, fern and Ledum. Soil horizons consist of a 7 - 9 cm thick humus, a 7 cm thick silty layer and a silt-sand-clay parent material. Site area measures about 18 x 10 m but may continue further southward.

Sampling: Two .25 m<sup>2</sup> tests about 10 m back from the edge were excavated.

Artifacts: Five quartzite flakes.



Discussion: The five quartzite thinning flakes from the silt layer of one pit were all of the same quartzite type suggesting a knapping activity of limited extent.

HjPc 16

Location: 57°34'30" N. Lat. x 112°28'32" W. Long. T 99, R 16, W 4.

Site description: A 2 m high rise above water along the northwest shore of Gardiner Lake. Minimum areal extent of terrace is 50 x 10 m and may incorporate the entire point. Vegetation is a fairly open growth of poplar, spruce, Ledum, rose, cranberry, Cladonia and grass. Soil consists of a 4 - 8 cm Sandy A, a dark charcoal bearing 3 cm thick B, and a grey sandy C.

Sampling: Five .25 m<sup>2</sup> and a 1 m<sup>2</sup> tests were excavated.

Artifacts: Five quartzite flakes of which one is linear.

Discussion: The linear flake with a single dorsal ridge was originally thought a good candidate for a microblade. Further testing failed to uncover similar flakes and closer analysis of the one indicates no platform preparation and a lipping form indicative of an oblique angle impact.

HjPc 17

Location: 57°34'26" N. Lat. x 112°27'36" W. Long. T 99, R 15, W 4.

Site description: Near the inlet from Big Island Lake between the arm and a bay at the north end of Gardiner Lake is a small terrace about 1 m high and 3 m from the water's edge. Mature spruce, poplar, willow, and low bush cranberry are present. Ground slopes sharply to the lake. Soil consists of a peat and brown silt upper horizon, a dark organic sand at 10 cm below surface and a linear sand-clay-gravel parent material.

Sampling: Two .25 m<sup>2</sup> tests were excavated.

Artifacts: Three quartzite retouch flakes were found at 10 - 12 cm below the surface.

Discussion: This site is clearly minimal.

HjPc 18

Location: 57°34'26" N. Lat. x 112°27'16" W. Long. T 99, R 15, W 4.

Site description: A low point vegetated with spruce, willow, poplar and low shrubs on the west shore of the arm.

Sampling: Five .25 m<sup>2</sup> tests were excavated.

Artifacts: Two quartzite flakes were noted in the humus.

Discussion: Also a minimal site.

HjPc 19

Location: 57°34'16" N. Lat. x 112°27'14" W. Long. T 99, R 15, W 4.

Site description: A 40 x 35 m grassy clearing surrounded by willow, poplar and spruce on the south shore of the bay inlet. Area slopes upward to about 3 m above water level. Soil consists of a 3 cm thick humus, a 6 cm dark organic sand and a light grey-brown sand and gravel base.

Sampling: Four .25 m<sup>2</sup> tests were excavated.

Artifacts: A painted porcelain trade sherd, quartzite retouch flake and a small quartzite scraper comprise the assemblage (Plate XVII).

Discussion: A buried prehistoric and a historic surface component were present. The prehistoric one is sparsely represented, probably a reflection of limited testing, although it was thought material would be more readily uncovered.

HjPc 20

Location: 57°34'16" N. Lat. x 112°26'56" W. Long. T 99, R 15, W 4.

Site description: About 300 m upriver from Gardiner Lake opposite the forks is a grassy 3 m high terrace of two rivers fronted by willows, mature spruce and birch. Strata consists of a 10 cm organic horizon, a 10 cm light brown sand mineral horizon and a dark brown parent material.

Sampling: Five .25 m<sup>2</sup> tests were excavated.

Artifacts: Sixteen quartzite flakes, mostly in the B horizon, were recovered. Late historic material was present on the surface.

Discussion: The flakes are not spatially or temporally diagnostic. Recent camp remains occurred on the surface.

HjPc 21

Location: 57°34'04" N. Lat. x 112°25'56" W. Long. T 99, R 15, W 4.

Site description: This is an extensive (est. 400 x 300 m) flat open well-drained terrace about 3 m above water level. Jackpine, Cladonia, blueberry, raspberry, young poplar and low grass are present. Soil is shallow with a 2 cm sandy A, a 9 cm charcoal mottled brown B, and a gravelly C.

Sampling: Four .25 m<sup>2</sup> tests were excavated quite distant from each other.

Artifacts: Recent camp remains were on the surface. Pre-historic occupations were evidenced by 11 quartzite thinning flakes.

Discussion: Flakes occurred in the B and C horizons of different pits. It is unfortunate that more time was not available for testing as it would probably have been rewarding based on the recovery of flakes in 3 of 4 tests, the presence of recent camps and the physical situation.

HjPc 22

Location: 57°34'34" N. Lat. x 112°27'00" W. Long. T 99, R 15, W 4.

Site description: A 3 m high jackpine ridge just before a small point on the small lake. Vegetation is spruce, birch, grass, moss and berries. Terrace is about 50 m wide and 200 m long.

Sampling: Surface collections and a single .25 m<sup>2</sup> test.

Artifacts: Four surface collected quartzite flakes.

Discussion: Two flakes are of Beaver Creek quartzite, the only instances of this material on Gardiner Lake.

HjPc 23

Location: 57°34'12" N. Lat. x 112°27'56" W. Long. T 99, R 15, W 4.

Site description: A 2 m high terrace about 20 x 10 m with vegetation of spruce, poplar, jackpine, cranberry and shrubs.

Sampling: Two .25 m<sup>2</sup> tests were excavated.

Artifacts: One chert and 6 quartzite flakes from one pit.

Discussion: Site does not merit further research.

GARDINER LAKE SUMMARY

Survey of this lake was restricted to the northern portion since C. Sims (n. d.) had previously examined the southern shoreline. Of 10 recorded sites, one (HjPc 14) was tested sufficiently to obtain a large sample. HjPc 21 and 22 may also contain an abundance of prehistoric data but lack of time prohibited further testing. None of the 7 other sites merits further excavation.

Quartzite was most frequently utilized followed by cherts. Beaver Creek quartzite was poorly represented. Terraces constitute 80% of the recorded site locations. A point from

HjPc 14 may be identified as Oxbow and if so evidences occupation of Gardiner Lake during the 3rd millenia B. C. This determination is far from certain, though. Unifaces include a medium-size tapering specimen and 3 thumbnail artifacts of which one is a cortexed pebble fragment. A large cortex spall, split chert pebble, porcelain sherd and retouched flake were also recorded.

## ARTIFACTS

### Introduction

Artifacts are distinguished according to technological, morphological and occasionally functional criteria and placed into commonly accepted categories. All specimens are qualitatively and quantitatively described and comparisons are made when appropriate. Measurements are to the nearest millimeter or gram and include maximum length (L) and width (W) or blade width (BW) and stem width (SW) as well as stem length (SL), blade length (BL), thickness (Th) and neck width (NW). Indices are width x 100/length (W/L) and thickness x 100/width (Th/W). High values associated with indices reflect stubby cross-sections and low values indicate long thin sections.

Every flake was examined on two or more occasions by different people. Lithic artifacts were assigned to one of five categories: black chert, other chert, Beaver Creek quartzite, other quartzite and other. Frequencies and percentages were calculated by site, drainage and region. Results of the latter are presented in Table X.

### Small Bifaces (Table I)

#### Stemmed

HkPa 4:141 A complete shouldered Beaver Creek quartzite biface with light lateral grinding on the stem. Blade edges are excurvate, shoulders form an obtuse angle with the blade, the stem is parallel sided to slightly contracting and the base is straight. Retouch is complete and flake scars are irregular.

Comparisons are best made with the Mackenzie complex (Millar 1968, Fig. 64 e; Dice 1973, Fig. 2 b), dated ca.

TABLE I

	Small Bifaces								
	L	BW	SW	SL	BL	Th	NW	W/L	Th/W
HkPa 4:141	42	22	15	14	28	8	-	52	36
HkPa 6:13	40	23	13	12	28	7	-	58	30
IcPx 1:126	45	20	-	-	-	9	-	44	45
HjPc 14:4	21	18	19	9	12	5	15	86	28
HkPa 4:136	27	18	16	10	18	6	9	67	33
HkPa 4:192	42	19	13	11	31	5	11	45	26
HkPa 11:1	38	17	16	10	28	6	11	45	35
HkPb 1:313	32	16	12	9	23	6	10	50	38
HkPb 7:1	(30)	22	16	-	20	6	11	-	27
IfPt 3:-	(29)	14	40	4	25	5	?	-	36
HjPc 4:6	(23)	15	-	-	-	5	-	-	33
HjPc 4:8	(35)	21	13	-	-	7	-	-	33
HkPb 5:2	(49)	26	-	-	-	10	-	-	38
Tips	-	-	-	-	-	-	x 5	-	-
Bases	-	-	x 14	-	-	-	x 4	-	-
	Blunted Bifaces								
HjPc 5:1	82	36	-	-	-	12	-	44	33
HjPc 9:1	73	30	25	37	36	11	-	41	37
HkPa 1:60	(50)	39	-	-	-	12	-	-	31
HkPa 4:8	52	29	-	-	-	14	-	56	48
HgOo 33:1	55	36	-	-	-	18	-	65	50
	Battered Bifaces								
HkPa 1:2	47	30	-	-	-	16	-	64	53
IfPt 4:6	44	27	-	-	-	11	-	61	41
IcQa 3:11	60	36	-	-	-	10	-	60	28
	Rectangular Bifaces								
IcPx 1:4	55	39	-	-	-	15	-	71	38
IcPx 4:1	(46)	49	-	-	-	19	-	-	39

100 B. C. - A. D. 500 and the Taltheilei tradition Windy Point Complex (Noble 1971: Fig. 11 b) thought to date A. D. 300-500. Personal observation of the Fisherman Lake material indicated that a similar specimen (Fig. 18) was uncovered at Pointed Mountain (JcRx 2).

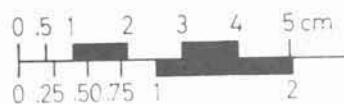


Figure 18

HkPa 6:13 An asymmetrical grey quartzite biface completely retouched on both faces to form biconvex transverse and longitudinal sections. Blade edges are excurvate, shoulders are asymmetric, the stem contracts slightly and the base is straight (Plate IX).

Similar specimens occur at the Gardiner Lake Narrows site (HjPd 1) (Sims, pers. comm.) and at Black Lake (Minni 1975, Plate I: 11, 12). Minni dates these items to the late pre-historic period.

IcPx 1:126 A non-vitreous black chert lanceolate biface with thick biconvex transverse and longitudinal sections and a convex base. Maximum width occurs high on the sides. Retouch is complete and irregular but usually perpendicular from the edge. Grinding is not present (Plate III).

Initial comparisons were with northern Agate Basin or Keewatin Lanceolate points but this was considered tenuous



and is now rejected. At present no suitable comparisons may be made.

Notched

HjPc 14:4 A small side-notched chert (?) biface with triangular blade edges, an "eared" stem and concave base. The base and notches are ground. Retouch is complete and irregular and both transverse and longitudinal sections are biconvex (Plate XVI).

This artifact compares best with Oxbow points dated ca. 3000 B. C. (Millar 1968, Noble 1971, Nero & McCorquodale 1958, McCullough pers. comm.) although about 50% of the archaeologists I sought assessments from opted for its classification as a "crummy" Besant point. Oxbow points have been found north and south of the survey area and their presence in the Birch Mountains is not unexpected.

HkPa 4:136 A complete grey chert biface with excurvate blade edges, wide deep notching, an expanded stem and a straight base. The lithic material is the only example found during this survey. The notches, stem and base are ground. Part of one shoulder is missing. Retouch is complete and irregular. Transverse and longitudinal sections are biconvex (Plate X).

This item is best compared with Pelican Lake points (Reeves 1970: 68ff) and assigned a late middle prehistoric (1300 B. C. - A. D. 0) context. Both Noble (1971:107) and Millar (pers. comm.) report Pelican Lake points dated ca. 200 B. C. - A. D. 200 from areas north of the Birch Mountains.

HkPa 4:192 A corner-notched black chert biface with a relatively long excurvate blade terminating in an acute ( $60^{\circ}$ ) tip. Shoulders are obtuse angular. The expanding stem, straight base and notches are ground. Retouch is perpendicular to the edges, irregular, and complete on one face but

marginal on the other. Transverse and longitudinal sections are generally biconvex (Plate X).

Suitable comparisons are with Taltheilei tradition points (Noble 1971: Fig. 14 e-g; Minnie 1975: Plate I:5) and Wright's (1975:22, Plate II:9) Besant point. Minnie assigns her Black Lake material to A. D. 1100 - 1500 and Wright (1975:137) suggests a date of A. D. 690 based on a radio-carbon assay.

HkPa 11:1 A side to corner-notched grey quartzite biface with triangular blade edges, asymmetric shoulders, wide notching and a straight to convex base. Transverse and longitudinal sections are biconvex. Grinding is present on all tang edges (Plate IX).

This point is similar to the above and, consequently, the same comparisons may be drawn with an additional one added, namely, Minnie (1975: Plate I:8). It too is considered indicative of Taltheilei tradition sites.

HkPb 1:313 A grey quartzite side-notched biface with an obtuse angle tip, excurvate blade edges, obtuse angular shoulders, symmetric notches having three angular facets, a narrow stem and flat base. The notches may have been slightly ground. Transverse and longitudinal sections are biconvex (Plate XI).

The only suitable formal comparison I am aware of is Fedirchuk's (1970: Fig. 10 d, e, h) Julian technology material from the Fisherman Lake area. On the basis of morphology alone I would tentatively assign this biface to the late middle prehistoric period (1500 B. C. - A. D. 400).

HkPb 7:1 A grey quartzite biface with a short triangular blade, small acute angular barbs, corner-notching, an expanding stem and straight base. Retouch is complete on this biconvex biface. Grinding is present on all edges from the notch proximally (Plate IX).

Both Wright (1975, Plate XII:23) and Reeves (1970: Fig. 12:19-20) figure similar points. Wright assigns his to the

Besant phase and Reeves to the Pelican Lake phase, consequently a temporal spread of ca. 1300 B. C. - A. D. 500 may be postulated.

IfPt 3 A grey quartzite point found by a fisherman on the disturbed airstrip was of reasonably good workmanship. Retouch was complete, irregular and oblique. The tip was missing, the parallel blade edges were straight to slightly convex, the low symmetric notching was by the removal of single flake scars on each face and little to no crushing was visible in the notches. The base was straight and no grinding was present.

Given the low narrow notches this point is probably relatively recent.

Non-stemmed

HjPc 4:6 A light grey quartzite approximately triangular biface lacking a tip. Blade edges and base are slightly convex. Retouch is complete and the flake scars broad and irregular. No grinding is present (Plate XII).

Suitable comparisons are with Plains Triangular points, a late (A. D. 800 - 1000 to A. D. 1825) manifestation on the Plains (see Quigg 1974: Fig. 18: 27-29; Reeves 1974).

Miscellaneous

HjPc 4:8 A grey quartzite biface with a snapped tip, excurvate blade edges, obtuse rounded shoulders and a transversely snapped base. Retouch is complete and longitudinal and transverse sections are biconvex. Some lateral stem grinding may be present (Plate XII).

This specimen is too incomplete to draw any definitive conclusions, but the absence of barbs and the presence of a wide excurvate blade lead me to infer a date of ca. A. D. 0.

HkPb 5:2 A relatively large biface of Beaver Creek

quartzite that is incomplete proximally. Artifact has straight triangular blade edges and obtuse angular ( $145^{\circ}$ ) shoulders. The biface may have had a lozenge or pentagonal shape although neither is certain because of incompleteness. The remaining stem portion has been laterally ground. Object is plano-convex longitudinally and biconvex transversely. One face is more steeply convex than the other and retouch on the steeper face exhibits numerous hinge fractures (Plate IX).

No figured comparisons are available but the high shoulders and lateral edge grinding proximal to the shoulder along with the tapering stem suggest the possibility, albeit tenuous, of a Hell Gap/Lake Mohave point (see Wormington 1964: 270-271).

#### Tips

Six grey quartzite biface distal portions with acute tips, biconvex cross-sections, and complete retouch. Includes HjPc 4:2, 5, 7, 38, 121; HjPc 13:4 (Plate XVI).

#### Bases

Two grey quartzite biface stem portions with expanding lateral edges and straight to slightly convex bases. All edges are lightly ground (Plate X).

#### Blunted Bifaces (N-5)

Artifacts which have a bifacially retouched straight to slightly convex right lateral edge and a blunted left lateral edge. Blunting is by natural cortex (4) or by bifacial retouch (1). The latter (HjPc 9:1) also has a pronounced shoulder. Two tip ends are pointed, 2 are rounded and 1 is missing. Proximal ends are straight (1) or rounded (4). Specimens are of rosy quartzite (2), grey quartzite (2) and banded chert (1) (Plates V, VIII, X, XIII, XIV).

#### Battered Bifaces (N-3)

Three grey quartzite specimens with one or more convex lateral edges bifacially retouched and battered to the extent that dulling is quite pronounced. One (HkPa 1:2) has most battering at the distal end. Artifacts LfPt 4:6 and IcQa 3:11 are approximately oval in shape (Plate I, III, VIII).

#### Rectangular Bifaces (N-2)

A black chert biface (IcPx 1:4) is crudely flaked and exhibits numerous hinge fractures. The dark grey quartzite specimen (IcPx 4:1) is snapped transversely, has large shallow flake scars and extensive battering along the three remaining straight edges. The latter specimen may well have functioned as a wedge (Plate III).

#### Biface Remnants (N-5)

Beaver Creek Quartzite (3), chert (1), and grey quartzite (1) are the raw materials represented. Specimen HgOv 36:2, 4 of Beaver Creek quartzite is a battered edge fragment of what had been a large thick (22 mm) biface with broad flake scars. Three other edge fragments and a biface flake scar of chert comprise the remainder of the sample (Plate V).

#### Unifaces (Table II)

##### Medium sized tapering (N-4)

Unifaces in this group have distal and lateral retouch and most are thick in cross-section. One (HjPc 5:4) has dorsal cortex and another (HjPc 14:3) has only one lateral edge retouched. Ventral surfaces are flat to slightly concave and none are retouched. Specimen HjPc 4:1 is dated  $3610 \pm 120$  B. P. (RL - 533) (Plates XII, XIII, XVI).

TABLE II

## Unifaces

	F	$\bar{x}$ L	$\bar{x}$ W	$\bar{x}$ Th	W/L	Th/W	
Medium Sized Tapering	4	41	24	12	61	48	HjPc 4:1,3; HjPc 5:4; HjPc 14:3;
Small Sized Tapering	11	21	19	6	91	32	IfPt 4:62; IcPx 1:127; He0s 1:1,3; Hh0v 29:3; Hg0v 34:1; Hi0v 1:3; HjPc 5:5; HjPc 14:5; HjPc 19:1; HkPb 1:31
Medium Size Asymmetric	3	35	42	12	120	29	Hg0v 37:3; Hi0v 1:17; IcQa 3:2
Pebble	3	31	25	8	87	32	He0s 1:5; Hh0v 29:4; HjPc 14:2
Lateral	3	38	26	11	68	42	HjPd 2:1; IcPx 1:20; IfPt 3:18; IfPt 4:113;
Flake	7	34	22	6	65	27	Hg0v 36:3; HjPc 5:19; HkPb 1:74,198; Hi0v 1:2,4; IgPv 1:1;
Rectangular	1	22	19	8	86	42	IcQa 5:1
Constricted	1	(26)	32	8	--	25	HjPc 13:3
Plano-concave	1	34	31	9	91	29	HjPc 4:24
Fragments	9	--	--	-	--	--	IcPx 1:114; IfPt 3:22; IcQa 3:9; He0s 1:4; HjPd 7:1; HkPa 1:79; HkPa 6:10; HkPb 1:30; HkPb 3:1

#### Small sized tapering (N-11)

Artifacts in this group have straight to convex distal working edges and at least one marginally retouched lateral edge. Bulbs of percussion are normally proximal to the working edge. No retouch is present on the flat to recurved ventral faces (Plates I, III, IV, V, VI, XI, XIII, XVI).

#### Medium sized asymmetric (N-3)

The three uniface in this group have one non-retouched lateral edge longer than the other and straight to convex distal working edges. Striking platforms are proximal to the working edge. Ventral faces are flat to concave and lack retouch (Plates III, V, VI).

#### Pebble uniface (N-3)

Artifacts in this group are made of split pebbles and are estimated to retain cortex covering greater than 90% of the dorsal surface. Only one uniface has limited lateral retouch. Retouch is usually restricted to the dorsal face and distal working edge. Working edges are slight to steeply convex in plan view. Ventral faces are generally flat (Plates IV, VI, XVI).

#### Lateral uniface (N-4)

The four uniface in this group are extensively retouched on one or more lateral edges. Two have both distal edge retouch and some cortex remaining on the dorsal face. Platform location varies. Three are thick and trianguloid in cross-section. No ventral retouch is present (Plates I, III, XIV).

#### Flake uniface (N-7)

Uniface in this group are variable in plan view, have retouch limited to a small portion of the distal end and are thin in cross-section. Cortex is present on 3 specimens (Plates I, V, VI, XI, XIII).

Rectangular uniface (N-1)

A black chert flake with marginal retouch on all four edges. The central dorsal face lacks cortex and retouch, exclusive of a single thinning flake scar. The ventral face is flat in one plane and concave in the other (Plate III).

Constricted uniface (N-1)

A grey quartzite flake with the distal and proximal ends missing. Both lateral edges are recurved to form a convex blade end and a constricted or shouldered proximal end. Only the right lateral edge is retouched. This artifact may have been hafted (Plate XV).

Plano-concave uniface (N-1)

A chert specimen that has all flake scar ridges heavily worn by mechanical weathering. Discoloration and a gloss may be attributed to thermal alteration. Both lateral edges are marginally retouched. Platform cortex is present at the proximal end and the distal end terminates abruptly as a result of hinging. Ventral face is slightly concave (Plate XII).

Uniface fragments (N-9)

Assorted fragments of intentionally retouched uniface. No measurements were taken. No fragments were unique in comparison to the above mentioned groups.

Uniface discussion

Unifaces often are of little assistance in delimiting specific spatial and temporal contexts; however, two of the above groups may be exceptions to this. Pebble unifaces are not uncommon to the boreal forest but are characteristic of the Plains, and flake unifaces are common to the boreal forest but not to the Plains (Adams, G.; Quigg, J., pers. comm.). It is impossible to speak of mutual exclusivity



yet we should consider these forms as indicative of greater or lesser communication with their region of normal association. Uniface raw material is relevant only insofar as regions are concerned; artifact groups are not typified or distinguished by any specific types of lithic material.

#### Blade-like flakes (N-4)

Artifacts in this category have a 2:1 length:width ratio, are roughly parallel-sided, have one or more longitudinal dorsal ridges, and were removed by an impact blow directed at one end of the flake (Plates VI, IXm XI, XV). They may not be associated with a macro or microblade industry because of the lack of evidence for platform preparation or cores (Sanger 1968).

Flake sizes range from large to relatively small (Table III). Two are of Beaver Creek quartzite, 1 of grey-white quartzite and 1 of chert. Three were recovered in the Birch Mountains and 1 on the Athabasca River. Larger blade-like or linear flakes are frequently reported from Boreal Forest sites (e.g. Noble 1971; Clark 1974; Syncrude 1974-2) but less often occur in Plains sites.

Table III

	L	W	Th
HhOv 29:1	106	49	21
HjPc 13:2	(80)	22	13
HkPb 1:23	28	10	3
HkPb 5:1	(30)	20	6

#### Burin related (N-3)

Two artifacts (HkPa 4:2, 10) are triangular in transverse section, linear in plan view, and have flat to slightly concave ventral faces. Distal ends are snapped. Proximal ends have a bulb of percussion on the ventral face and 3 to 8

stepped hinge fractures on the dorsal proximal portion. Both are of quartzite (Plate X).

A third specimen (He0s 1:2) of Beaver Creek quartzite is tear-drop shaped and thick in cross-section. A single convex flake scar or facet measuring 21 mm x 4 mm is directed longitudinally on a lateral edge. Both ends of the facet have a slight depression and it is not possible to determine from which end the flake was detached (Plate IV).

Each of these artifacts indicates only the possibility of burin manufacture although He0s 1:2 does not evidence edge wear. Burins have been reported from Fisherman Lake (Millar 1968), central district of Mackenzie (Noble 1971), the Athabasca River (Sims pers. comm.) and other areas to the north. Their presence on the Plains is less certain (Brumley 1972).

#### Core rejuvenation flakes (N-2)

Two flakes have numerous flake scars and hinge fractures perpendicular to the right lateral dorsal edge (Table IV). Left lateral edges are only slightly altered and a pronounced platform is present (Plates VII, IX). These flakes were probably detached to straighten or renew an unworkable flaking surface due to hinge fracturing (Syn crude 1974-2; Sims 1975:25)

Table IV

	L	W	TH
Hh0v 27:1	64	35	17
HkPa 6:8, 31	44	11	7
$\bar{x}$	54	23	12

Similar flakes are reported for sites along Beaver Creek and are known to occur in the Plains (Adams, pers. comm.) but they are not reported further north in the Boreal forest.

### Retouched flakes (N-19)

Flakes in this category have retouch that is short, discontinuous and irregular. Intentionally retouched flakes have more pronounced retouch than non-intentionally retouched ones. Flakes are separated according to retouch edge form. One specimen had use-polish associated with the retouch.

### Intentional Retouch (N-15)

convex edge N-4  
straight edge N-2  
concave edge N-5  
irregular edge N-4

### Non-intentional Retouch (N-4)

All four flakes in this category have only slight retouch. The paucity of utilized flakes is quite striking in that previous experience with Boreal Forest sites has shown retouched flakes to be the predominant artifact.

### Split pebbles (N-6)

The absence of bipolar percussion indicates that specimens in this group were split or had flakes detached by an oblique blow. One specimen (Hg0v 35:12) has two linear flake scars on one edge, but it is too fragmented to merit further discussion. Five are of cryptocrystalline and one of microcrystalline material. None appear utilized (Plates V, VI, XII, XVI).

Table V

	L	W	Th
HjPc 4:74	44	32	12
HjPc 12:8	41	33	13
HjPc 14:126	31	28	10
Hg0v 25:12	12	10	16
Hh0v 29:2	48	35	11
IcPx 1:111	31	33	15
$\bar{x}$	35	29	13

Bipolar cores (N-5)

Nodule remnants that are crushed and/or have flake scars emanating from opposite ends of the specimen. Bipolar percussion is a manufacturing technique used when small cores are to be worked. Three specimens are of cryptocrystalline and 2 of microcrystalline material (Plates XI, XV).

Table VI

	L	W	Th
HkPb 1:29	34	20	10
HjPc 3:1	28	16	6
HjPc 4:58	33	21	7
HjPc 13:1	38	21	11
IfPu 1:3	<u>48</u>	<u>35</u>	<u>22</u>
$\bar{x}$	36	23	11

Bipolar flakes (N-3)

Three cryptocrystalline specimens with crushing or flake scars emanating from opposite ends of a flake. No indications of use wear or retouch were present (Plates II, X, XI).

Table VII

	L	W	Th
HkPa 4:153	28	28	6
HkPb 1:72	37	15	6
IfPo 1:37	22	7	9

Hammerstones (N-3)

Flattened oval pebbles with battering at one or both ends. All are microcrystalline material.

Table VIII

	L	W	M	Wt
	126	84	36	391.93 gm
	90	74	47	512.85 gm
	74	61	25	170.30 gm
$\bar{x}$	97	73	36	358.36 gm

Core remnants (N-16)

Multifaceted nodules that have a mean weight of 167 gm. Quartzite was the favoured (69%) raw material.

Abraded Lithic nodule (N-1)

A dense heavy nodule rich in iron and having a hardness of between 2 and 6 was recovered in the A horizon of a bulldozed cutline at about the 488 m contour interval on the south slope of Caribou Mountains. The specimen is multifaceted but lacks convincing retouch scars. A triangular abrasion facet (approximately 9 x 14 mm) is present on one face and associated ridges have been slightly abraded (Figure 19). It is not practical to assume a position for or against intentional artifact manufacture given the minimal information available.

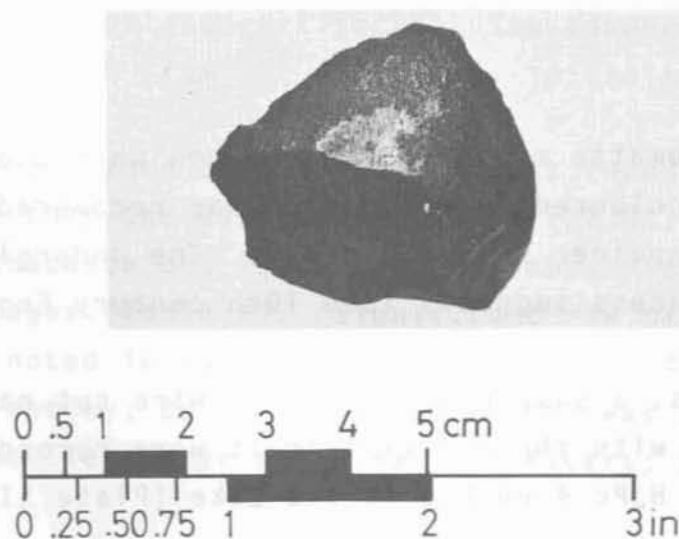


Figure 19

### Cortex spall (N-9)

A common artifact category and one for which comparative data is not particularly useful. Most of the spalls are oval in plan view, plano-convex or biconvex in cross-section, have cortex and lack retouch. Two have extensive retouch; one unifacial and one bifacial and a third has limited use-retouch. Eight were of quartzite and one of gneiss.

Table IX

	L	W	Th
$\bar{x}$	114	78	20
range	85-117	62-101	14-29
N	8	8	9

### Bifacial core tools (N-3)

Two core tools in this category are quite large (150 x 75 x 51 mm and 152 x 125 x 73 mm) and one is of moderate size (121 x 80 x 30 mm). Materials are rosy quartzite, dolomite and Beaver Creek quartzite, respectively. The first specimen has a cortexed platform and well-controlled bifacial flaking. The dolomitic specimen is battered at both ends. Similar artifacts occur to the south, e.g. Lac la Biche.

### Historic

A monochromatic medium paste earthen ware plate fragment with a rose coloured flower design was recovered on the surface at Gardiner Lake (HjPc 19). The underglaze transfer print process suggests late 19th century English ware (Plate XVI).

Seed beads, a suspender buckle, 2 wire cut nails and a metal button with thread still in it were recorded in the A horizon of HjPc 4 on Big Island Lake (Plate XII).

An 84 mm long sturgeon hook with a flattened rather than eyed shank was recovered at IgPq 4 on Pitchimi Lake (Plate II).

A 21 mm diameter metal button dated to the late 18th or early 19th century (J. Nicks, pers. comm.) and a pot lug fragment were excavated at IgPq 2 on Pitchimi Lake (Plate II).

A large open copper cooking pot probably dating to the late 19th century on the basis of rivets rather than lugs having been used to fasten the handle (J. Nicks, pers. comm.) and an associated but undated enameled metal saucer were found on the surface of IfPt 2 on Margaret Lake.

A table knife (HdOs 1:1) with a bone handle has a French (?) inscription on the blade (Plate IV).

#### Artifact Summary

Obvious and significant differences in artifact and debitage frequencies and materials are present between major areas. In general, the Birch Mountains appear to have been more heavily utilized than the Caribou Mountains, both the Peace and Clearwater-Athabasca River terraces contained numerous sites and distributional differences in lithic raw materials are present. Also noted are the overlapping areas of Plains and Boreal Forest related artifacts. The temporal range represented extends from ca. 4070 B. C. to the historic period.

A greater abundance of lithic items was found in the Birch (51.3%) than the Caribou Mountains (22.0%), while the Clearwater-Athabasca and Peace River systems yielded virtually equal percentages (Table X). Significant raw material differences are noted in that quartzite formed 87.4% of the Birch Mountains inventory; Beaver Creek quartzite was predominant (87.8%) in the Clearwater and Athabasca Rivers; and cherts

TABLE  $\bar{X}$

Frequencies of Raw Material

	Black Chert	Other Cherts	Beaver Creek Quartzite	Quartzite	Other	Total	
Birch Mtns.	99	94	57	2064	47	2361	(51.30%)
Clearwater/ Athabasca R.	7	27	547	36	6	623	(13.54%)
Peace River	73	196	0	335	3	607	(13.19%)
Caribou Mtns.	130	442	0	428	11	1011	(21.97%)
Total	309	759	604	2863	67	4602	100%

Relative Percentages Within Regions

Birch Mtns.	4.19	3.98	2.41	87.42	1.99	99.9
Clearwater/ Athabasca R.	1.12	4.33	87.80	5.78	0.96	99.9
Peace River	12.03	32.29	0	55.19	0.49	100
Caribou Mtns.	12.86	43.72	0	42.33	1.09	100

Percentages of Material Between Regions

Birch Mtns.	32.04	12.38	9.44	72.09	70.15
Clearwater/ Athabasca R.	2.27	3.56	90.56	1.26	8.96
Peace River	23.62	25.82	0	11.70	4.48
Caribou Mtns.	42.07	58.23	0	14.95	16.42
Total	100	99.99	100	100	100.01



and quartzites predominated (99%) in the Caribou Mountains and Peace River Regions. Black chert comprised 12% of the sample in the latter two regions but only 2.7% in the Birch Mountain and Clearwater-Athabasca areas. This is considered indicative primarily of source availability and serves to point up the fact that a material such as Beaver Creek quartzite may be preferred, but not sufficiently so that people would bother transporting more than a small quantity (2.4%) to the Birch Mountains. In Alberta, black chert is normally thought of as indicative of the Peace River area and suggests greater interaction along it or local availability of the material. Lithic artifacts (f=153) comprised 3.4% of the lithic non-artifacts (f=4449), that is, we recovered 29.1 flakes for every artifact.

Comparisons were made in the Artifact Descriptive section with Plains or Boreal Forest related forms in order to draw attention to their overlapping distributions. Plains or Boreal Forest "related" suggests only that the forms compared with are more frequently found in a Plains or Boreal Forest context. It does not imply that, for example, "Plains hunters", "Athabasca speakers", or "Pelican Lake peoples" were inhabiting the sites and regions discussed. Artifact forms are rarely restricted to a region or a people no matter how delimited and, by extension, almost all areas are culturally transitional in space. Almost equal numbers of Plains and Boreal Forest related artifacts were recovered indicating no emphasis on one or the other area. The former includes a large bifacial core tool, Oxbow and Pelican Lake-like points, pebble unifaces and core rejuvenation flakes. In the latter category are Taltheilei points, flake unifaces, blade-like flakes and possibly burin-like objects.

### Site Distribution

A primary research objective was to ascertain whether or not the Caribou and Birch Mountains were differentially utilized prehistorically. For this reason, stops and sites were recorded in a manner that allowed for comparisons of site densities and locations. Necessary data included total distances surveyed and actual distances between sites, the physiographic situations in which sites occurred, and the number of times we stopped to examine these locations.

Five lakes were surveyed on each of the two uplands. Almost equal distances (87.01 km on the Caribou Mountains, 95.73 km on the Birch Mountains) and man-days (80 on the Caribou Mountains, 84 on the Birch Mountains) were involved. On the Caribou upland 68 stops and 22 sites were recorded while on the Birch upland we stopped 107 times and found 49 sites. Thus, we made less than twice the number of stops but recorded more than twice the number of sites on the latter (Table XIII). Mean distances between all sites were 4.8 km in the Caribou and 1.7 in the Birch uplands. Clearly, a much denser distribution obtained for the latter.

Distances between stops were measured in kilometers using a map wheel and totalled to determine distances on each lake or river. The mean distance between sites on all lakes for each upland became the Expected value in a chi-square test of significance. Actual distances between sites on each lake formed the Observed values. Degrees of freedom equal one less than the number of sites on a lake. The .05 probability level is used to evaluate significantly sparse or dense site distributions (see Tables XI, XII).

The chi-square value for Margaret Lake is so significant it does not appear on the  $X^2$  table used. A couple of reasons why this lake was so sparsely populated may be posited. A rather weak argument is that only one flat well-drained terrace

TABLE XI

Site Density

Lake or River	Sites f=	km surveyed	$\bar{x}$ dist. between sites
Margaret	5	52.13	17.88
Eva	2	.80	.40
Semo	4	11.15	1.60
Pitchimi	6	5.23	.95
Wentzel	5	17.70	2.45
Total	22	87.01	4.808
Eaglenest	7	8.85	1.11
Clear	8	9.65	1.00
Sandy	8	25.74	2.75
Big Island	16	31.38	2.03
Gardiner	10	20.11	1.40
Total	49	95.73	1.73
Peace	8	3.2	.34
Clearwater	2	8.96	8.05
Athabasca	12	34.4	3.82
South Slope	1	16.09	
Total	94	234.16	$\bar{x}=2.49$

TABLE XII

Site Density Chi-Square Test of Significance

<u>Lake</u>	<u>chi-square value</u>	<u>d.f.</u>	<u>Level of significance</u>
Margaret	141.42	3	<.001
Eva	3.34	1	.10
Semo	6.35	2	.05
Pitchimi	12.038	3	.01
Wentzel	5.623	3	.20
Eaglenest	2.172	4	.80
Clear	6.651	7	.50
Sandy	18.131	6	.01
Big Island	22.325	13	.05
Gardiner	4.705	8	.80

occurs on the lake. However, beaches often served as camping locations. Fish resources also fail to account for the sparseness as approximately 14000 pounds of fish are produced in the lake annually (Smith 1970). Perhaps more important but difficult to substantiate is a remark by Fa. Vandersteen (pers. comm.) that native people at Jean d'Or Prairie did not frequent Margaret Lake because of the storm pattern and a consequent fear or dislike of the lake. Qualified support for his remark lies in the fact that the 19.7 km long lake is oriented N.N.W. or almost parallel to the prevailing summer winds. The lake outlet, Ponton River, is at the west end and could contribute to turbulence in that wind and water would be at odds.

Semo Lake produces only 830 pounds of fish per year and the small basin with densely vegetated and steeply sloping or low lying sides offers only one suitable location for a site at the west end. Factors of topography and poor fish production would act against people choosing to utilize the lake.

Pitchimi Lake is significant for the high density of sites recorded there. Fa. Vandersteen (pers. comm.) noted that it was a favourite fishing lake of the native people. It currently produces about 5000 pounds of fish per year and, if the "sturgeon" hook recovered in excavation is any indication of fish size, some may have been quite large.

Sites on Big Island Lake were less densely distributed than might be expected given that approximately 5 pounds of fish per acre or about 18500 pounds annually is postulated (Turner 1968: 100). Possibly the convoluted shoreline should be taken into account.

Sandy Lake had a significantly low frequency of sites. This is best attributed to the ologotropic nature of the lake and the low annual fish production of 2.5 pounds per acre or 8750 pounds per year (Turner 1968: 122).

All stops and sites were recorded and classified as a beach, terrace, hill or bush clearing. The largest and most

productive sites on the uplands were situated on terraces (f=6) and beaches (f=3), and at the ends of portages (f=4) or at an end or edge of a river (f=4). Terrace sites on the uplands account for 50.7% of all those recorded. Beach and bush clearing locations represented 19.7% each. Hills (9.9%) were not particularly favoured.

Does this perhaps reflect a sampling bias? Did we stop mainly at terraces and only infrequently at hills? By recording both stops and sites we can check our success or failure rate in terms of expected vs. observed frequencies and calculate chi-square values for each location type within an area. Table XIII presents the frequency of stops and sites by region and type. Utilizing information for the two uplands only, I first determined the expected number of stops per site ( $68 \div 22 = 3.09$  for Caribou Mountains,  $107 \div 49 = 2.18$  for Birch Mountains). By dividing the expected values for each upland into the number of stops by type the expected frequency of sites by type was derived. Chi-square values were then obtained for each region and site type. Only the frequency of bush clearings on the Birch Mountains was significant (.01 level at 1 d.f) in that more sites of that type per stop occurred than was expected.

I have not included data on the rivers or the south slope of the Caribou Mountains. Our high success rate on the Peace River is very much a reflection of continuous walking along exposed terraces. On the Athabasca and Clearwater Rivers we canoed and stopped mainly at exposed areas. Because of vegetational differences stops were more widely spaced on the Athabasca than the Peace. No comparative data was available for the south slope.

All things being equal we were apt to find more sites closer together on the Birch Mountains than the Caribou Mountains. In all but one case we recorded an expectable number of sites per stop, the exception being the high frequency of bush clearings on the Birch Mountains. Given

TABLE XIII

Frequencies of Stops to Sites by Region

Type	Clearwater Athabasca		Peace River		Caribou Mtns.		South Slope		Birch Mtns.		Total	
Beach	3	1	0	0	34	7	0	0	19	7	56	15
Terrace	32	13	9	8	16	9	8	1	69	27	134	58
Hill	0	0	0	0	4	0	6	0	11	7	21	7
Bush Clearing	0	0	0	0	14	6	0	0	8	8	22	14
	35	14	9	8	68	22	14	1	107	49	233	94

the small sample, however, it is best not to extrapolate too much from the latter. Margaret, Pitchimi and Sandy Lakes yielded sites that were more or less spatially separated than expected. This information leads to questions regarding sampling techniques, fish resources, prevailing winds, etc., that are difficult to evaluate but were significant to native peoples' use of the lakes. The greater frequency and proximity of sites in the Birch Mountains compared to the Caribou Mountains is, I think, primarily related to the more favourable habitat on the Birch Mountains. Verification of this statement would require in-depth ecological analyses, but "Habitat" seems to be the only significant variable in the two uplands that could lead to differential utilization patterns.



## Regional Prehistory

Of the approximately 8300 recorded archaeological sites in Alberta less than 10% occur north of 54° North Latitude and most of these are undescribed surface collections (Figure 20). A brief review and assessment of northern Alberta prehistory based on published reports and the examination of collections in and out of the province is presented here.

Research at the Fisherman Lake locality in southwestern N. W. T. indicates a prehistory commencing perhaps 15,000 years ago (Millar 1968). Around 12000 to 8000 B. C. the better defined Cordilleran complex, characterized by a blade-core technology, large bipoints, burins and various scraper forms, occurs. The succeeding and markedly different Stem Point complex (7500-6000 B. C.) is distinguished by straight stemmed points and virtually no blade-core technology. Following it was the Agate Basin Plano complex (5500-300 B. C.) defined primarily on the basis of points thought derived from the Plains. In the succeeding Julian complex (2500-1500 B. C.) a blade-core technology dissimilar from that found earlier is present. Diagnostic artifacts now include microblade cores, medium lanceolate points, corner to side-notched points and large core tools, the latter considered indicative of a forest adaptation. A blade-core technology continues into the Pointed Mountain complex (1500-1000 B. C.) with only a shift in emphasis. Oxbow points dating 1000-700 B. C. as part of the Fish Lake complex are more characteristic of Plains assemblages. A proliferation of stemmed points coincidental with the virtual disappearances of the Julian and blade-core technologies marks the Mackenzie complex (300 B. C. - A. D. 500) succeeded by the Spence River complex (A. D. 500-1800) with its small side-notched points (Millar 1968; MacNeish 1954; Fedirchuk 1970).

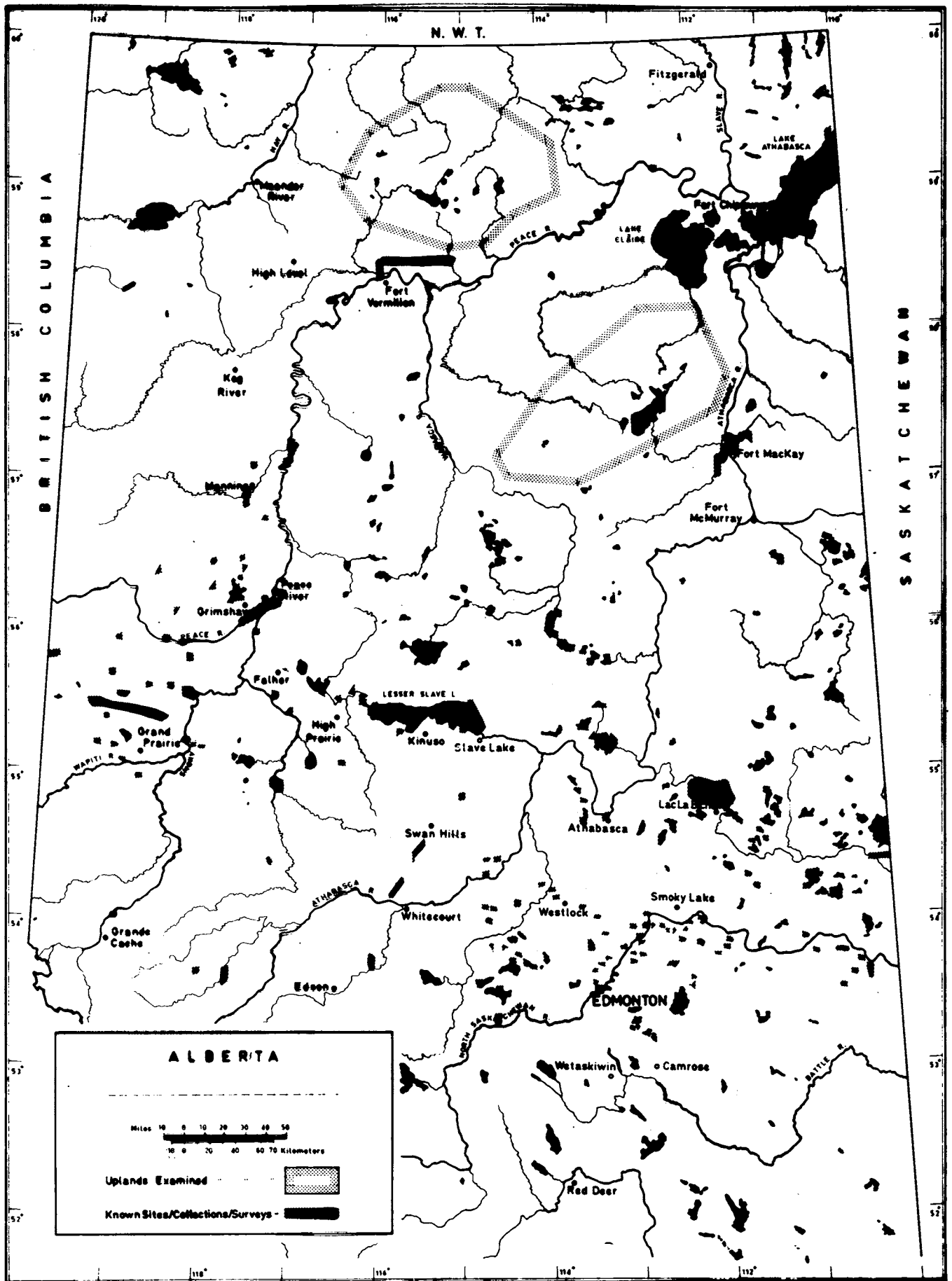


Figure 20

Fisherman Lake assemblages include a high percentage of grey-black chert or argillite and lesser quantities of welded tuff (Cinq-Mars 1973) and obsidian. Exclusive of Oxbow and other Plains-related points, the assemblages reflect attributes common to northern Boreal Forest sites.

Surveys from Great Slave Lake north into the central District of Mackenzie resulted in a proposed series of cultural sequences encompassing the period from 5000 B. C. to the present (Noble 1971). The Acasta Lake complex, dated 5000 B. C. and part of the northern Plano tradition, is characterized by relatively large straight based lanceolate, stemmed, side-notched bipointed and bulbous stemmed points associated with transverse burins and heavy scrapers. Between ca. 2500 B. C. and A. D. 200 Oxbow, Caribou Island and Pelican Lake complexes appear and are considered indicative of "brief late summer sortie camps by (southern) Indians wishing to capitalize on migrating caribou or stray buffalo" (Noble 1971:107). These Plains-related incursions were juxtaposed by those of Canadian Tundra tradition (Arctic Small Tool tradition) manufacturers whose typologically dated (ca. 1200-200 B. C.) assemblages represent "a cautious and slow movement inland of Taiga-tundra adapted peoples" (op cit.). Initiated around 200 B. C. and continuing into the historic Chipewyan period is the Taltheilei Shale tradition based on 188 sites and 10 complexes.

Many northern archaeologists view Taltheilei as indicative of a rapid Athabaskan movement into the area and their continuous occupation up to the historic period. Noble (1971) suggested an initial date of 200 B. C. for Hennessey complex material. Gordon's work further east on the upper Thelon recovered similar material in contexts dated 395-490 B. C. (Wright 1975:139). A transition from the 50-74 mm long shouldered and stem ground Hennessey points to smaller

corner-removed and side-notched forms, sometimes with lightly ground basal edges and notches, occurs ca. A. D. 1100. Burins and a blade-core technology are absent from the Taltheilei tradition.

Research by Nero and Wright in 1960, 1963, 1971 and 1972 on the north and south shore of Lake Athabasca resulted in data pertaining to Arctic Small Tool tradition, Taltheilei tradition and various Plains assemblages. Northern Plano and late Shield Archaic tradition artifacts were also noted. Wright infers an east-west dichotomy between Boreal Forest-moose-caribou related Taltheilei material and Plains-bison associated Besant phase artifacts. A Besant identification is assigned the Ig00 1 site on the basis of location, a point, cobble spalls and cobble tools (Wright 1975: 10-27, Plates I, II). Conversely, the Taltheilei identification is based on the presence of Taltheilei points, wedges, spokeshaves, flake knives, linear flakes, abraders, scrapers, chi-thos and location. Debitage platform types and angles are used to support the inferred dichotomy. Two charcoal dates of A. D. 690 and A. D. 1950 were in Stratum III above (?) the Besant point.

I view the "Besant" point identification and supposition that it is of Plains authorship as less than certain, and suggest that more favourable comparisons lie with late Taltheilei Lockhart River complex forms (MacNeish 1951, Noble 1971, Minni 1975). Wright's east-west dichotomy is not supported by the data.

At Black Lake in north central Saskatchewan early and late Taltheilei, ASTt, and Pelican Lake artifacts and some fabric impressed punctate Selkirk phase pottery were recovered (Minni 1975, Wright 1975). Considering the views expressed above it is noteworthy that a point attributed to the Pelican Lake phase occurred at Black Lake. Side-notched Taltheilei points (Minni 1975, Pl. 2:10) similar to those

figured by Noble occur at Black Lake and in northern Manitoba where they have been dated A. D. 1300 by Nash (Minni 1975:98-99).

The Penner site (IgPc 1) is located west of Lake Athabasca at Peace Point on the lower Peace River (Figure 20). Artifacts surface collected by D. Penner have been classified as Agate Basin Plano or Mackenzie points (Fedirchuk 1973). My own examination of the artifacts leads me to suggest that the one complete point is not Agate Basin Plano. The veined grey chert specimen (36 x 14 x 6 mm) is well made with roughly collateral flaking on one face and irregular retouch on the other. The base is thinned by lateral retouch and no grinding is present. Comparable bifaces have been recovered by Cinq-Mars (pers. comm.) at Yellow Lake, N.W.T. from an undated site (LdRq 2). The other biface from IgPc 1 is a possible blade fragment.

South of Lake Athabasca near Fort MacKay and Mildred Lake highway surveys and tar sands related test excavations have been conducted by T. Losey and C. Sims (Synchrude 1973-4, 1974-2, Sims 1975, Sims n.d.). Following a preliminary survey of Synchrude Lease No. 17, a field season was devoted to research at the Beaver Creek Quarry site (HgOv 6) south of Ft. MacKay. At the quarry a large number of finished artifacts were not of the quarry material, a fine-grained re-deposited quartzite. Major usage of the site, attested to by the presence of "Besant" points and a relatively homogeneous artifact sample, appears to have taken place about A. D. 300. An Agate Basin-like point indicates possibly earlier (8000-4000 B. C.) quarrying at the site.

A survey of Shell Canada Lease C-13 (Sims and Losey n.d.) on the right bank of the Athabasca River near Ft. MacKay was oriented, in part, toward defining patterns of historic and prehistoric human occupations. Sites were situated a maximum

of 16.6 km east of the Athabasca. Most were near open water and areas of present day environmental diversity. Unfortunately, survey was somewhat restricted to locations that were already disturbed by construction. How much sampling was conducted outside these areas is uncertain. Many sites (f=11) were over 1.6 km from rivers in the research area and widely distributed.

Artifacts included a notched transverse and longitudinal burin with four burin spalls, a ground expanding stem base, a Hennessey point base and a possible Kamut or Acasta point base (Sims and Losey n.d.: Figure 3). The latter are dated 5000 B. C. in N.W.T. by Noble (1971) where they are associated with burins. The Hennessey point base would be indicative of early Taltheilei tradition material. Thus, in this locality there is reasonably good evidence for 5 different occupation periods extending from 5000 B. C. to the historic period.

A survey of Namur and Gardiner Lakes in the Birch Mountains, south of Township 99, by Sims (n.d.) recorded one large site (HjPd 1). Located at the Gardiner Lake Narrows, the site was occupied prehistorically and historically. Prehistoric artifacts were spread over at least 122 m and include 2 quartzite stemmed bifaces similar to one recovered at Clear Lake (HkPa 6:13).

Further south at Calling Lake and Lac La Biche are approximately 200 sites yielding material best associated with Plains contexts, namely, bifacial and unifacial cobble tools, Oxbow, McKean, and Pelican Lake points. Microblades initially reported for Calling Lake are no longer considered to be such. In both localities quartzite is the predominant raw material. Pottery, consisting of two small sherds at Calling Lake and five larger ones at Lac La Biche, is present (Figure 21). The latter dates after A. D. 1000.

In this regard, pottery north of Edmonton occurs from the North Saskatchewan River to Calling Lake and Lac La Biche, and then is next reported for Reindeer, Black Lake and the east end of Lake Athabasca (Adams, pers. comm.). This is a striking north-east oriented incline which, at present, is not known to correlate with any other factor.

The area immediately west and east of Edmonton appears best related to a northern Plains sequence. An obsidian flake found at the Cormie Ranch site about 50 miles west of Edmonton and dating ca. 2500 B. C. is derived from Yellowstone (Losey 1972 and pers. comm. 1975) and indicates interaction in that direction. This is significant in that further north and west the obsidian is obtained from British Columbia (Figure 22).

Turning now to the foothills and western edge of the province, research has concentrated around the Saddle and Birch Hills north and northwest of Grande Prairie respectively. Earliest evidence for occupation is by manufacturers of fluted points reported in the Dunvegan area (Byrne, pers. comm.). Fluted points do not occur in any great frequency north of Edmonton, although Scottsbluff-Eden, Alberta, and Agate Basin points have been reported from just north of Edmonton to the Peace River area. Thus far they definitely have not been found in Alberta north of the community of Peace River. This fact may be related to a lack of research in the area (Figure 23).

Assemblages in west central Alberta are characterized by their presence on high terraces rather than lower ones, and by having a high frequency of black chert artifacts and debitage. Ross Thomson's (1973) research in the Saddle Hills indicates that although quartzite was readily available, black chert was normally used. He suggests the Liard River in British Columbia and the Red River near Fort Vermilion as possible sources.

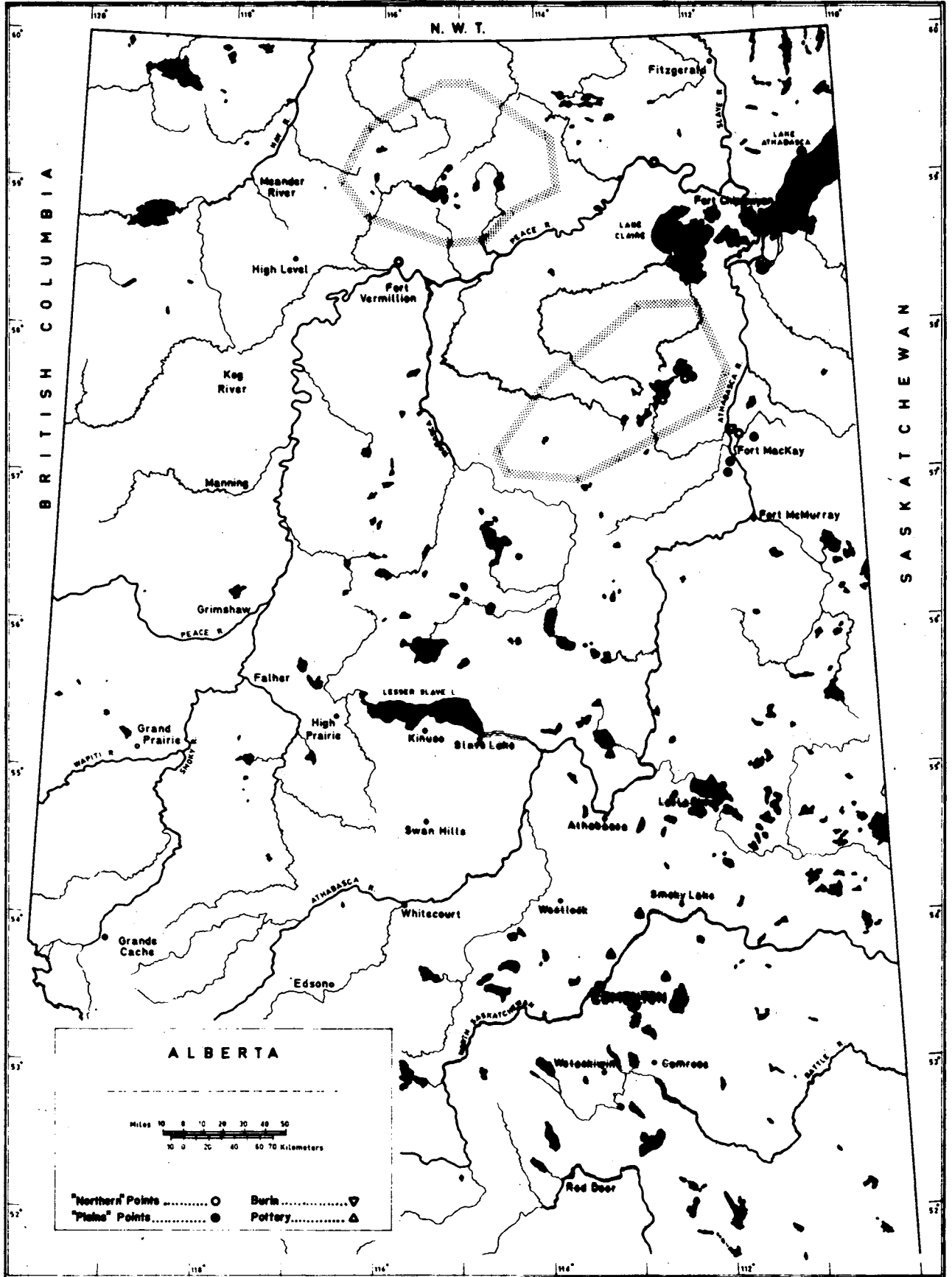


Figure 21



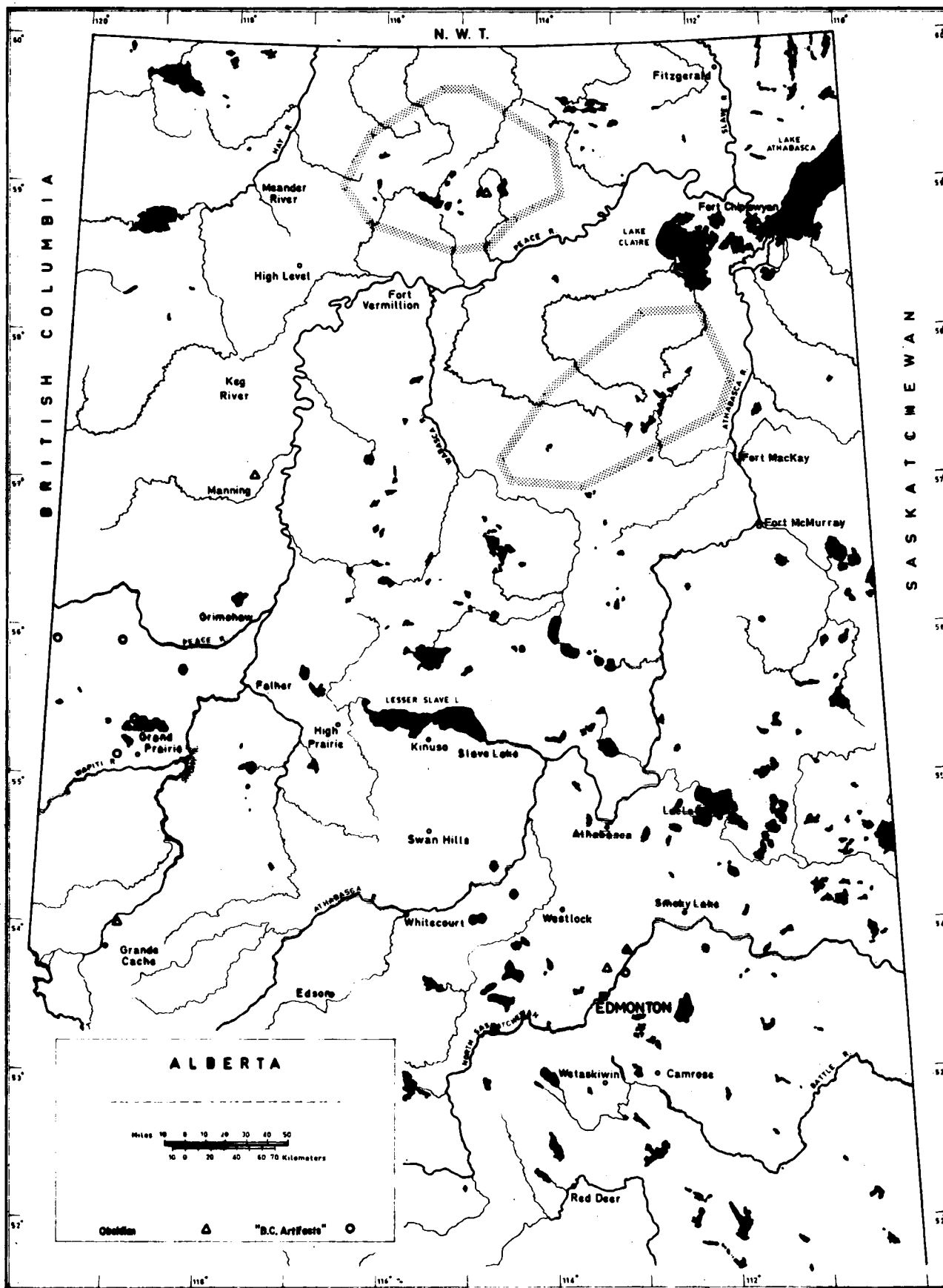


Figure 22

Allan Bryan salvage excavated the Karpinsky site, near Wanham, and recovered artifacts and debitage in the frequency of one quartzite to nine black chert items (Conaty, n.d.). Bryan also obtained non-utilized black chert cobbles on the surface. The suggestion is that they may have been water transported downriver from the west. In view of work I have done in British Columbia, I was quite struck by the similarities of the black chert to what I consider a fine-grained basalt. Basalt is also present at the Karpinsky site.

This single component site has a date of A. D.  $880 \pm 55$  (S-517) derived from a hearth associated with the 3 - 4 m artifact concentration. Both bipolar cores and large flat thinning flakes of chert were present, indicating both the amplex of material and the frugality with which it could be used. The cortex flakes, unretouched flakes and core-remnants clearly indicate production at the site. Scrapers, graters, hammerstones, bifaces and cortex spall tools further indicate a campsite. No burins, microblades or microblade cores were observed personally.

The assemblage has been called Taltheilei. I disagree. The diagnostic items, the bifaces, are too thin, too well made, of the wrong form and a considerable distance separates them from other Taltheilei sites. On the other hand, the thin cross-section, manufacturing technique, raw material and overall composition is not unlike that for artifacts from the central interior of British Columbia, although few comparable points occur in that locale.

This is not out of line when one considers the evidence for interaction on an east-west axis across the Rockies. Jack Brink (pers. comm.), for example, recovered a flake of obsidian from Anahim Peak in central British Columbia at the Smoky site near Grande Cache. Ground stone celts are not thought to have been manufactured in Alberta, but have

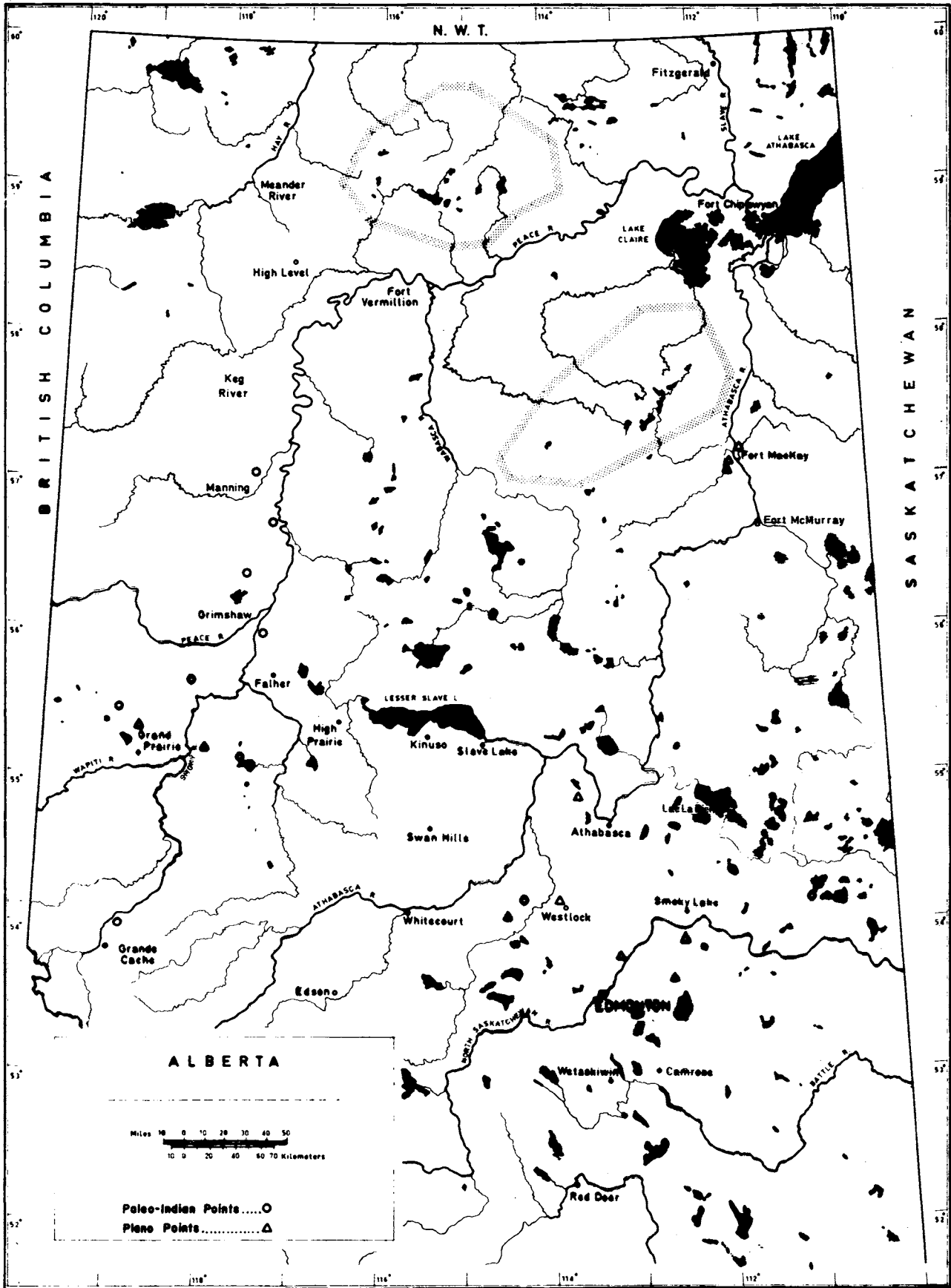


Figure 23

a dense distribution along the Peace River closest to the border and microblades, when found, are usually adjacent to the west edge of the province (Figure 22).

In summary, first occupation of the northern half of the province is evidenced by fluted and plano points, the former not at present known in the far north. The north shore of Lake Athabasca was occupied by 6500 B. C., and offers evidence for Arctic Small Tool tradition material dated ca. 1000-700 B. C. and later, perhaps by 400 B. C., Taltheilei tradition assemblages. There is no substantive data for Plains assemblages on the north shore of the lake, but data is present on the south shore. In south western N.W.T. and by extension northwest Alberta, Oxbow-like points are present. Evidence for Taltheilei tradition occurs at Fisherman Lake in the Mackenzie complex and in eastern Alberta near the community of Fort MacKay.

## Conclusion

Occupation of the Caribou Mountains may not have occurred before 8600 B. P., the date of proposed deglaciation and vegetation formation. A slightly earlier date for occupation of the Birch Mountains may be inferred. The oldest occupation of the Birch Mountains is tentatively dated to ca. 5000 B. P. on the basis of a point typologically comparable to Oxbow points and to 5200 B.P. for the Caribou Mountains on a C-14 assay. Successively recent sites are represented by Pelican Lake, early and late Taltheilei and side-notched points as well as historic artifacts. The absence of earlier sites on the uplands is not viewed as an accurate reflection of the prehistory. On Lake Athabasca and in the immediate vicinity of Fort MacKay on the Athabasca River, possible Plano age points dated ca. 8500 and 7000 B. P. have been reported (Figure 23). Also on the Athabasca a notched transverse and longitudinal burin and a Hennessey point base were found. Since low lying areas were utilized some 3000 years prior to that known for the Birch Mountains, we may suspect that the peoples' annual cycle also took them to the uplands.

Artifacts normally attributed to Plains or Northern Boreal Forest, occur throughout the area's prehistoric assemblages and serve to highlight the transitional nature of the region (Figure 21). The earliest example of this is the northern Plano Acasta Lake complex material (Sims, n.d. ). Later examples are Taltheilei, Oxbow and Pelican Lake complex artifacts. Geographic distributions for Taltheilei material have been greatly expanded by the recent spate of archaeological research in northern Alberta.

Numerous arguments may be put forward regarding the nature of the distributions. I prefer a relatively simple socio-economic one. Resources are differentially distributed and gain or lose favour through time, and groups of people inhabit and exploit contiguous areas. Trade and other forms

of interaction provide a mechanism for the redistribution of materials and ideas. Obsidian from Yellowstone, Anahim Peak and an unknown location, and welded tuff from the Keele River, ground stone axes and obsidian microblades comparable to those from British Columbia have all been recorded in Alberta north of Edmonton and are indicative of interaction (Figure 22). The crux of this statement is that people of a particular ethno-linguistic or cultural affiliation need not have physically penetrated an area.

Were the Caribou and Birch Mountains utilized to different degrees? Yes, they were. Given the same techniques, equal distances, situations on lakes, and the same number of man-days spent on each upland, we recorded twice as many sites located less than half as far apart on the Birch Mountains as on the Caribou Mountains. Also, spatially and temporally more extensive sites occurred on the Birch upland. It is presumed that site distribution is indicative of resource utilization in each area and that the Birch Mountains is a more favourable habitat.

Within each upland, evidence pertaining to differential use of lakes was obtained. In the cases of Margaret, Pit-chimi and Semo Lakes arguments were presented as to why they were or were not heavily utilized. An explanation was also offered for the sparseness of sites at Sandy Lake. A study of ecological variables pertinent to each of these lakes could prove beneficial to the archaeological interpretations and vice-versa.

The freedom to survey areas not previously researched has resulted in a number of contributions elaborated on in the body of this report. We supplemented the data base by, for example, expanding the known geographic distributions of certain artifact types and recorded sites warranting more detailed investigation. Two of the most significant sites (IfPo 1 and HkPa 4) have since been made available to other

archaeologists. Site locational analysis indicated that beaches, terraces, hills and bush clearings were, for all intents and purposes, utilized to the same degree in each of the uplands. The same may not be said for lakes which, by extrapolating from the frequency and proximity of sites, appear to have varied in their importance to the people. It remains for further in-depth studies to ascertain what these plus and minus factors were. Finally, the fact that quantifiably more densely distributed and more productive sites occurred on the Birch than the Caribou Mountains is taken as support for the thesis proposed at the outset, namely, that the Birch Mountains offer a more favourable habitat and should contain a greater density of sites.

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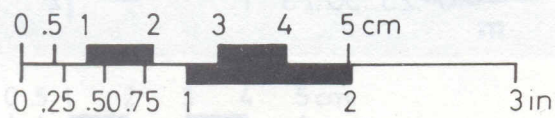


Plate 1

Margaret Lake (a, f, g, h) and Eva Lake (b, c, d, e)

Peace River IcPx 1 (a, b, e, c, g, h, i) and other sites  
(c, d, j, k, l, m)

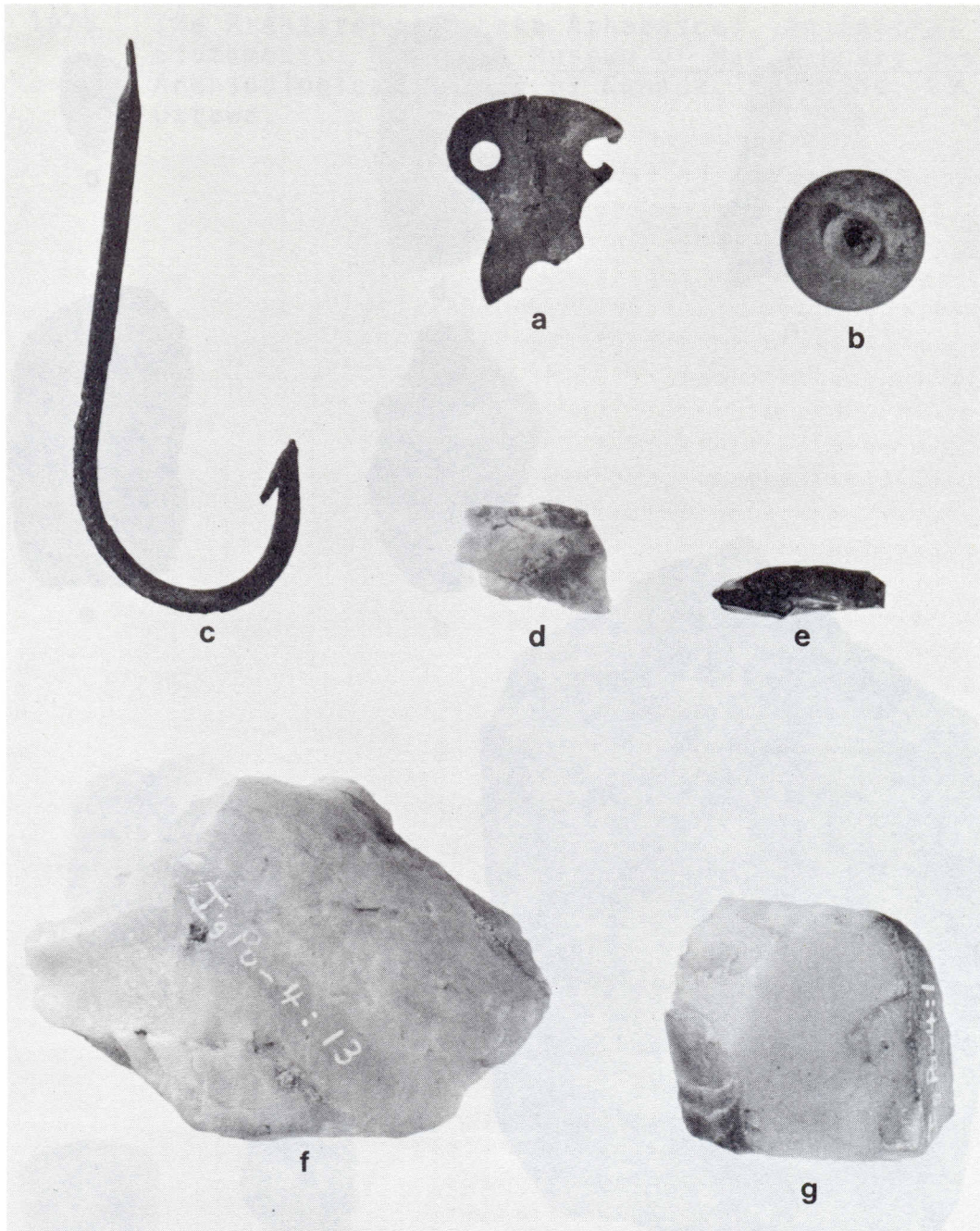


Plate II  
Pitchimi Lake (a, b, c) and Wentzel Lake (d, e, f, g)

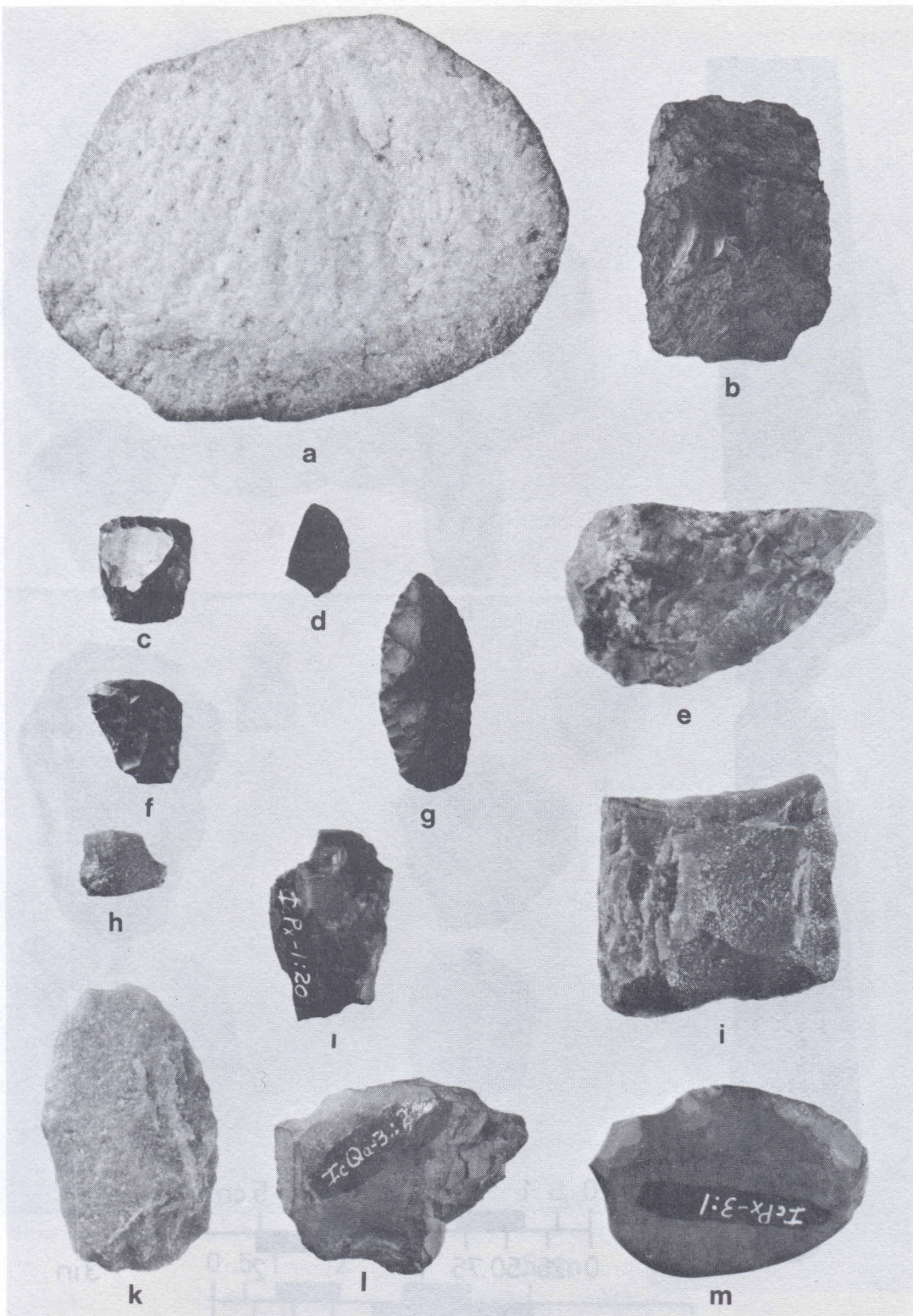


Plate III

Peace River IcPx 1 (a, b, e, f, g, h, i) and other sites (c, d, j, k, l, m)

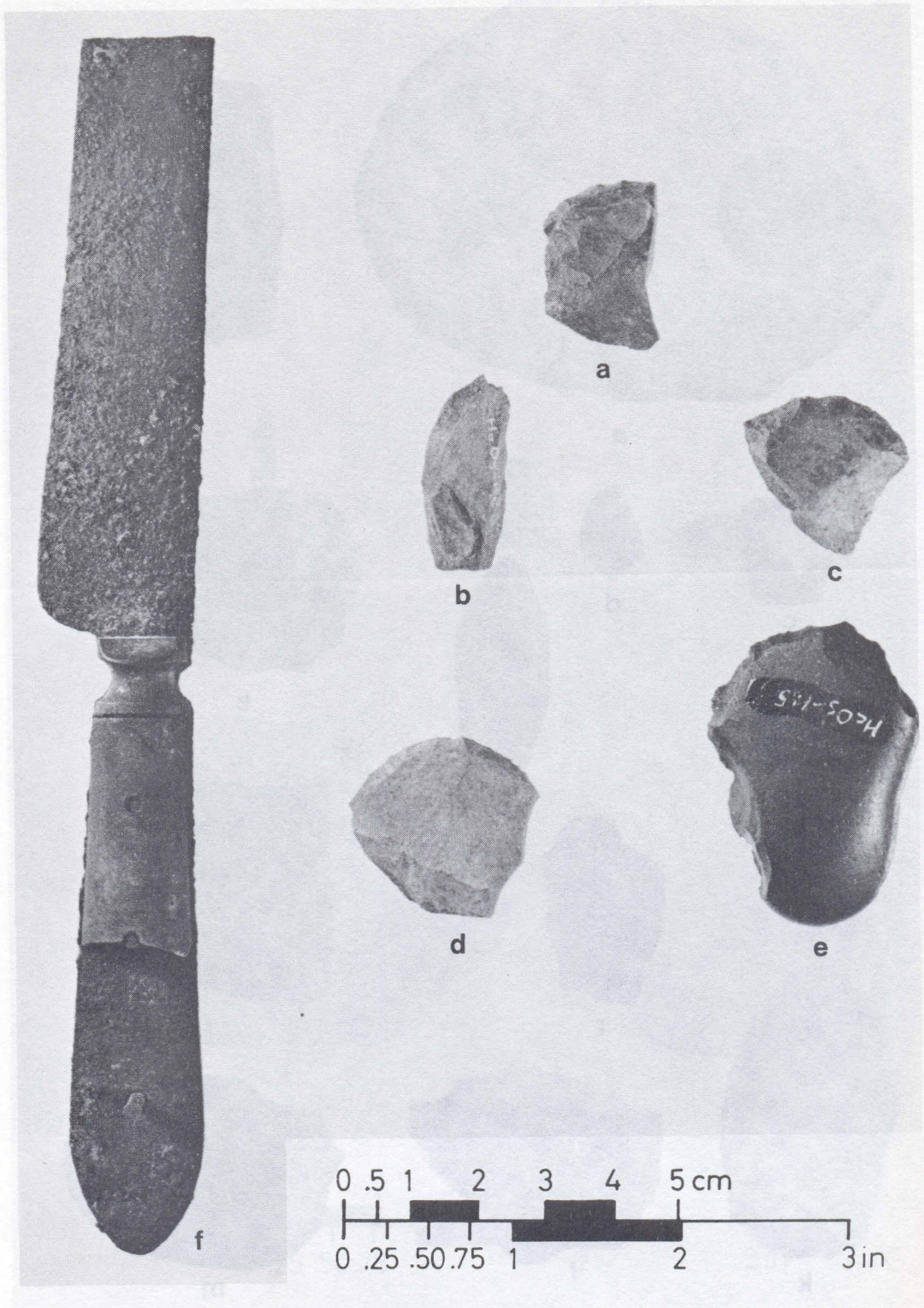


Plate IV  
Clearwater River

Pitchimi Lake (a, b, c, d, e, f) and other sites  
Pasce River (g, h, i, j, k, l, m)



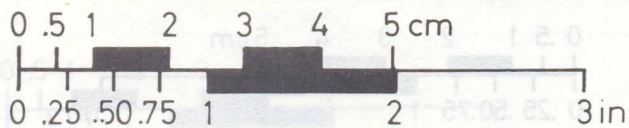
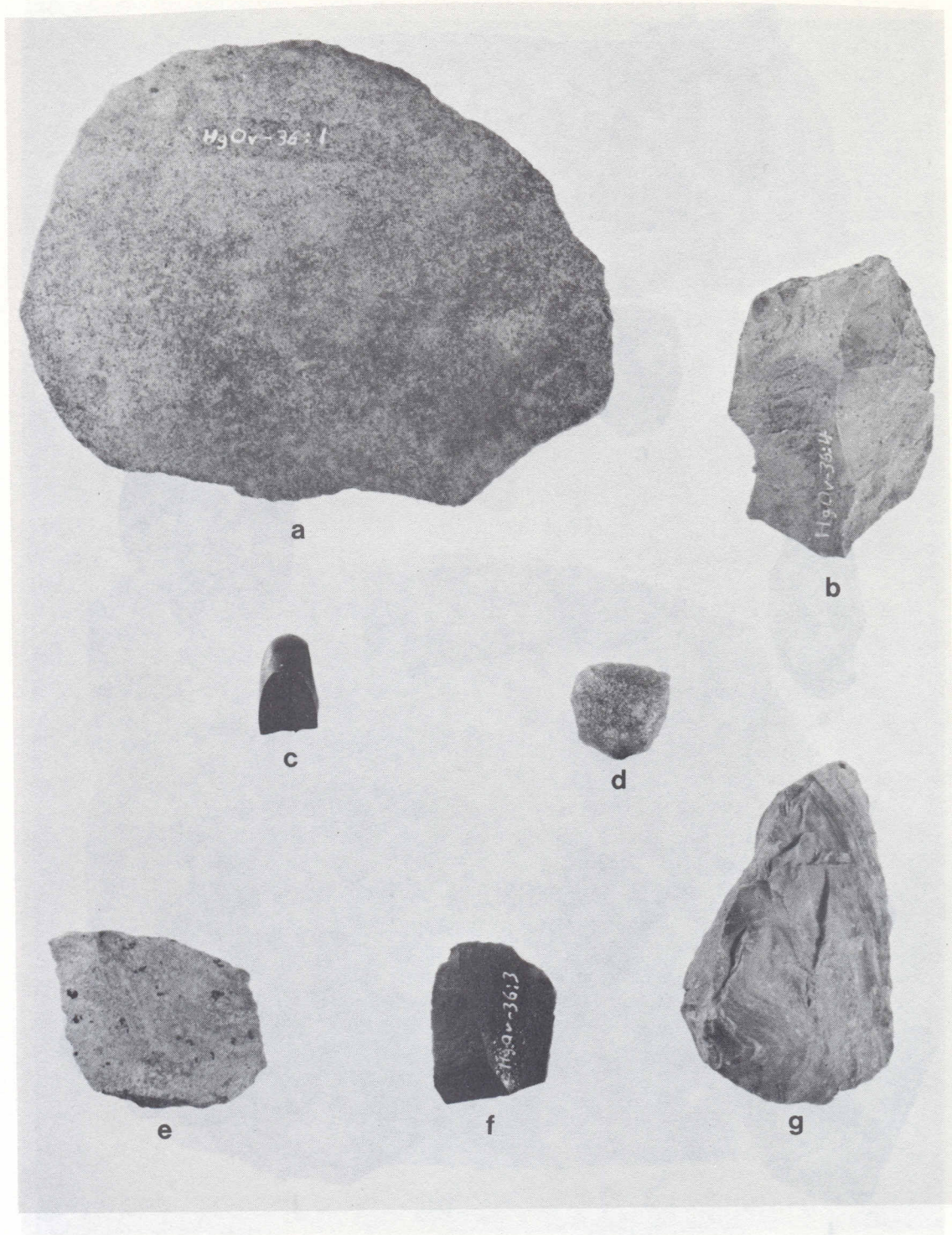


Plate V

HgOv 33 (g), HgOv 34 (d), HgOv 35 (c),  
HgOv 36 (a, b, f), HgOv 37 (e)

(g, f, e, d, c, b, a) HgOv 37 (e), HgOv 36 (a, b, f), HgOv 35 (c), HgOv 34 (d), HgOv 33 (g)

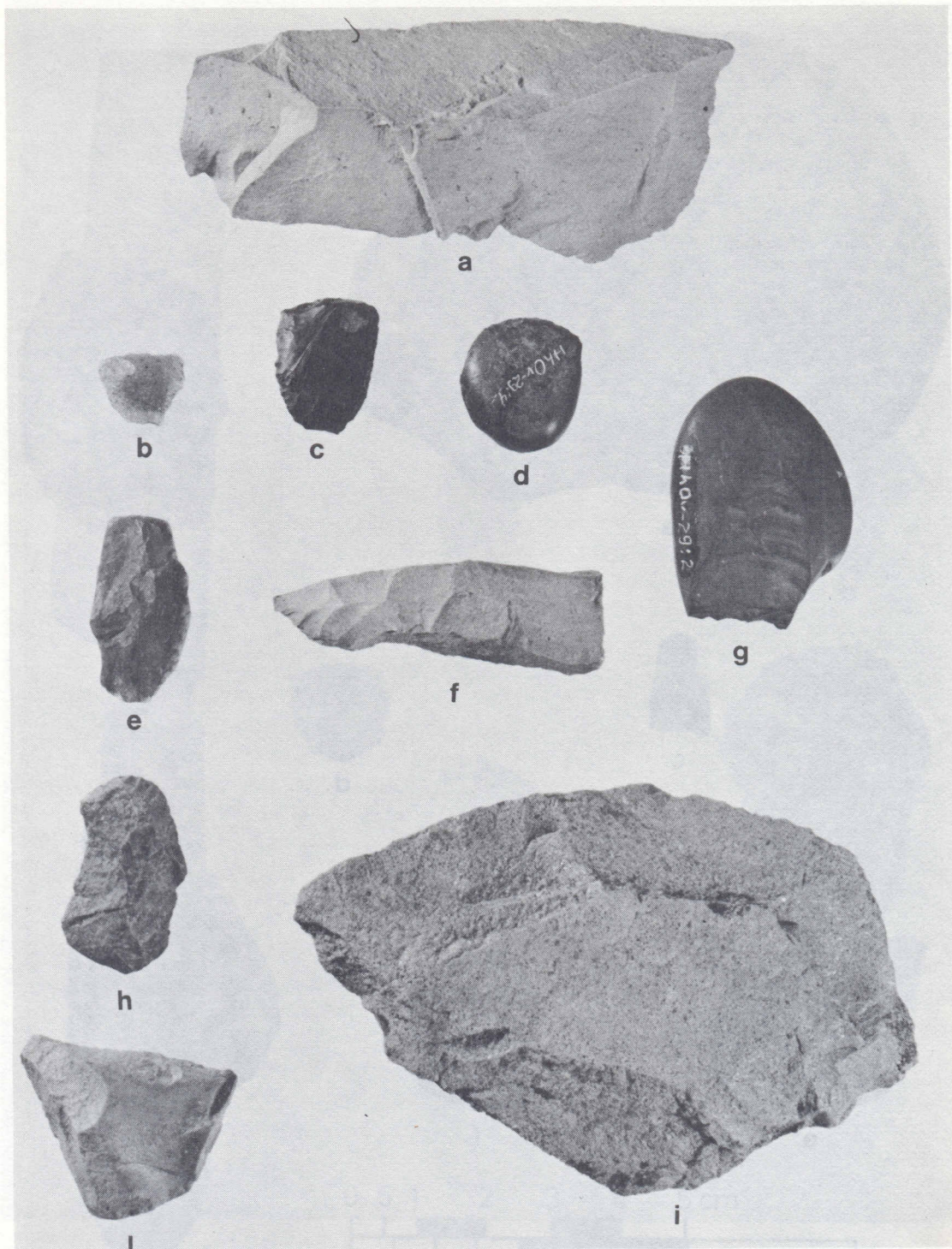


Plate VI  
Hh0v 29 (a, c, d, g), Hi0v 1 (b, e, f, h, i, j)

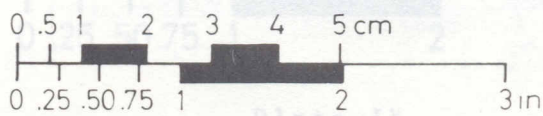
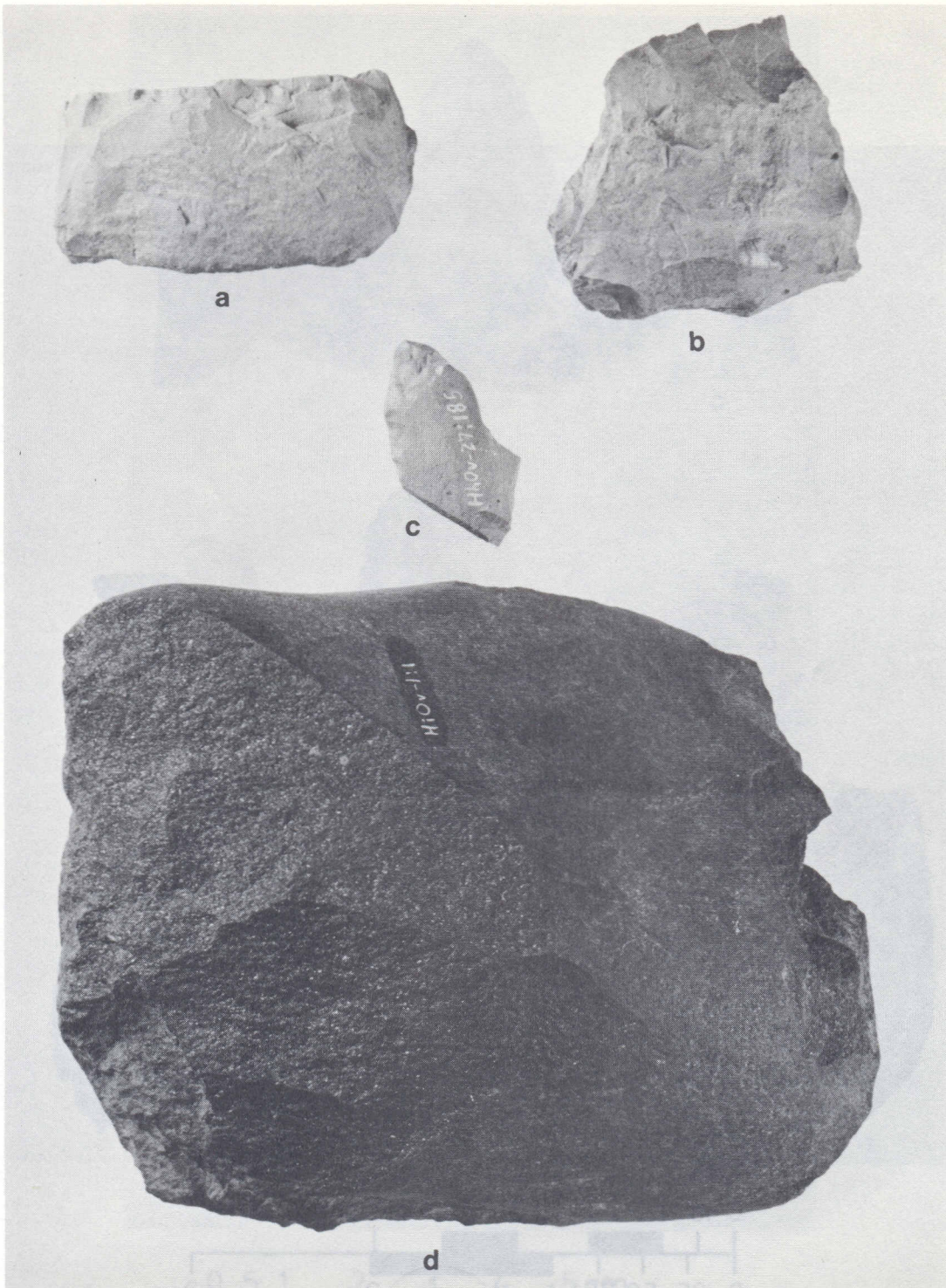


Plate VII  
Eaglenest Lake (d), Saddy Lake (a, b, c, g)  
HhOv 27 (a, c), HhOv 28 (b), HiOv (d)

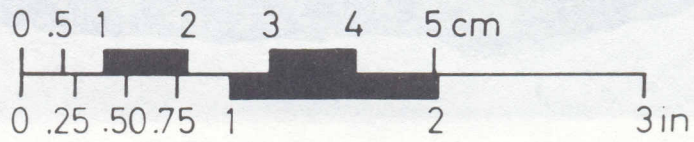
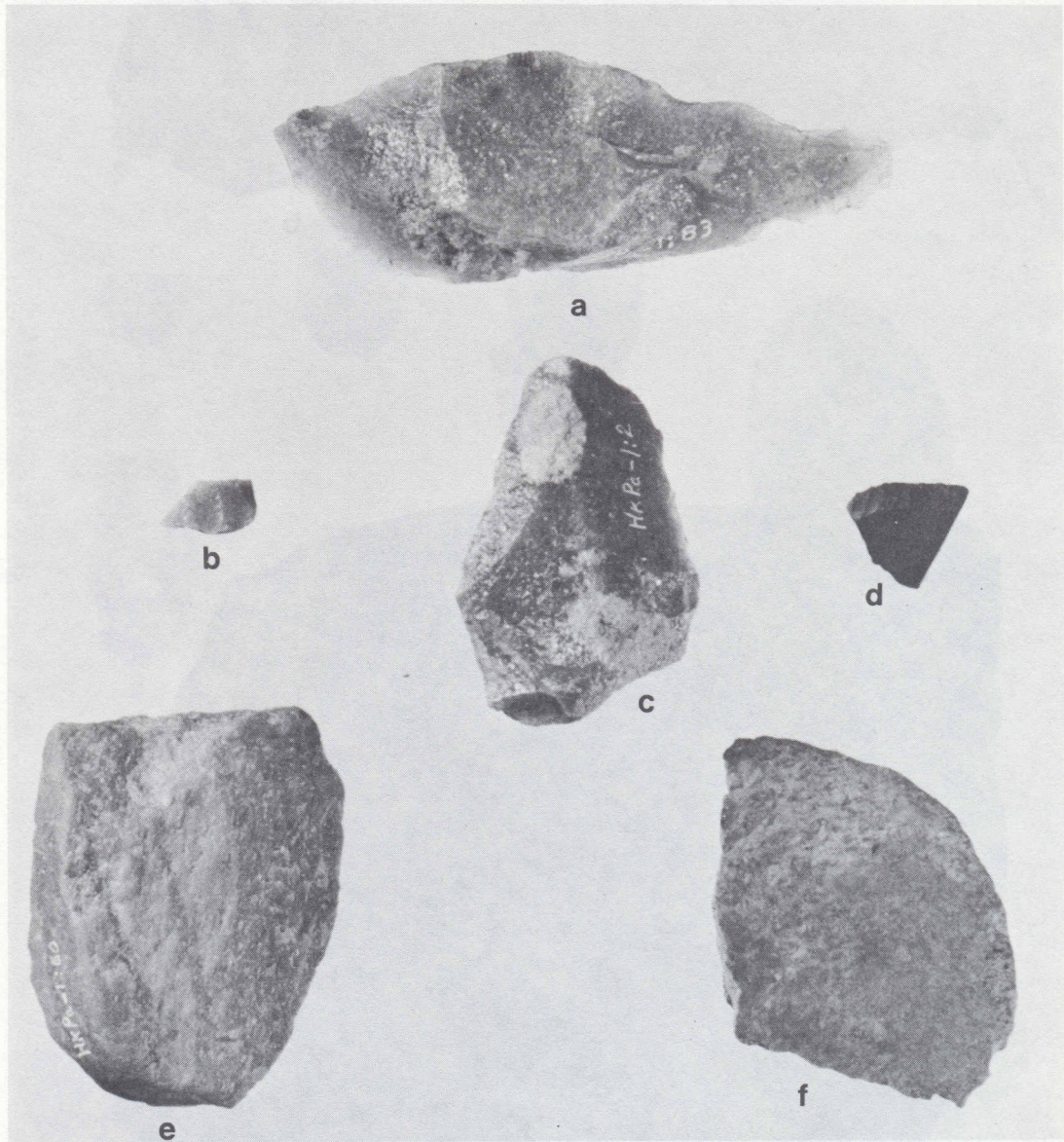


Plate VIII

Eaglenest Lake HkPa 1

HkPa 29 (a, c, d, g), HkPa 1 (b, e, f, h, i, j)

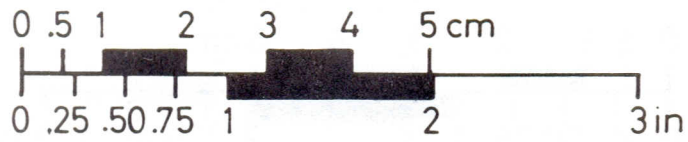
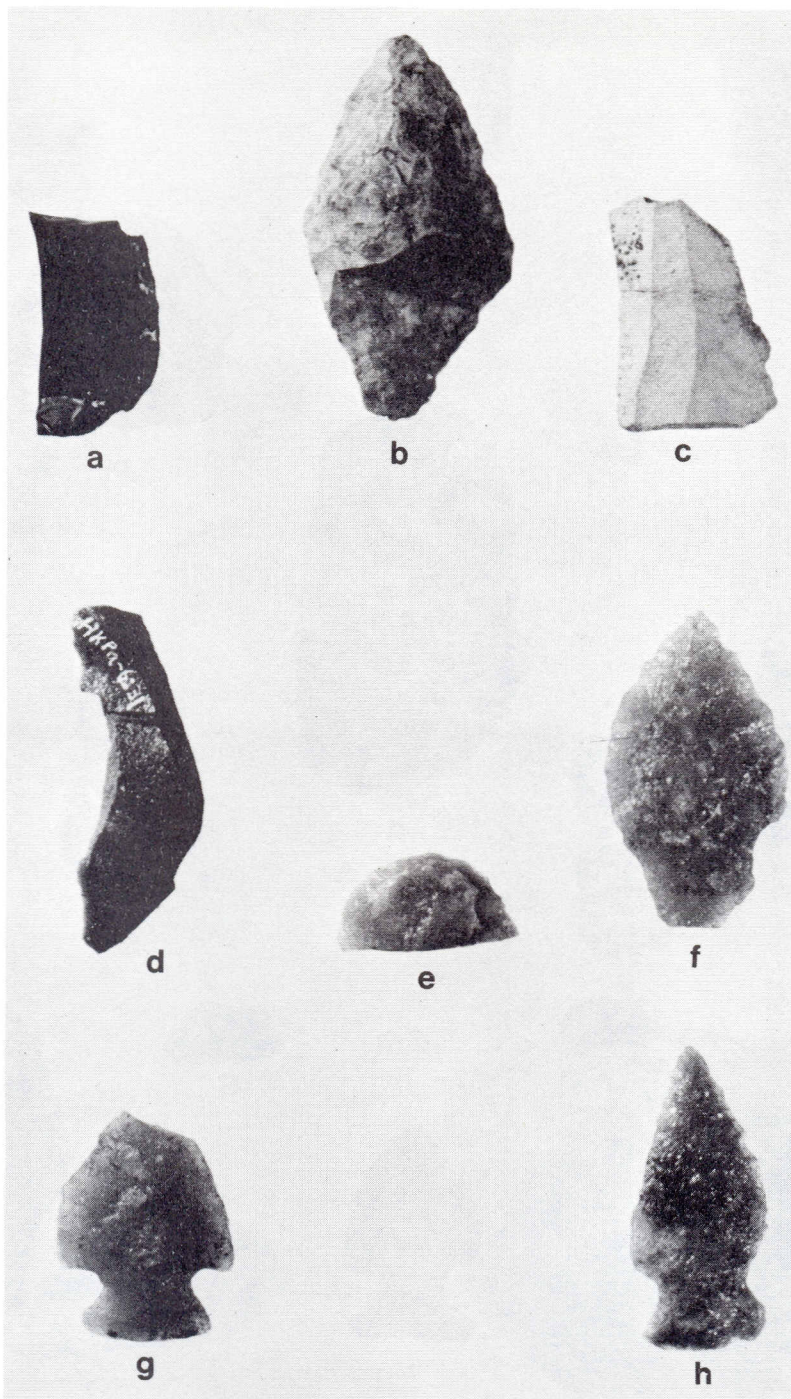


Plate IX

Eaglenest Lake (d, e, f, h) and Sandy Lake (a, b, c, g)

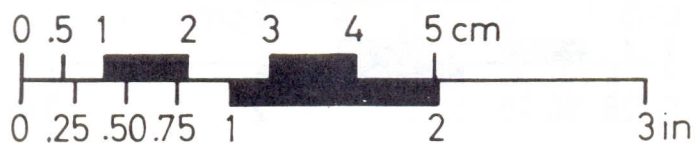
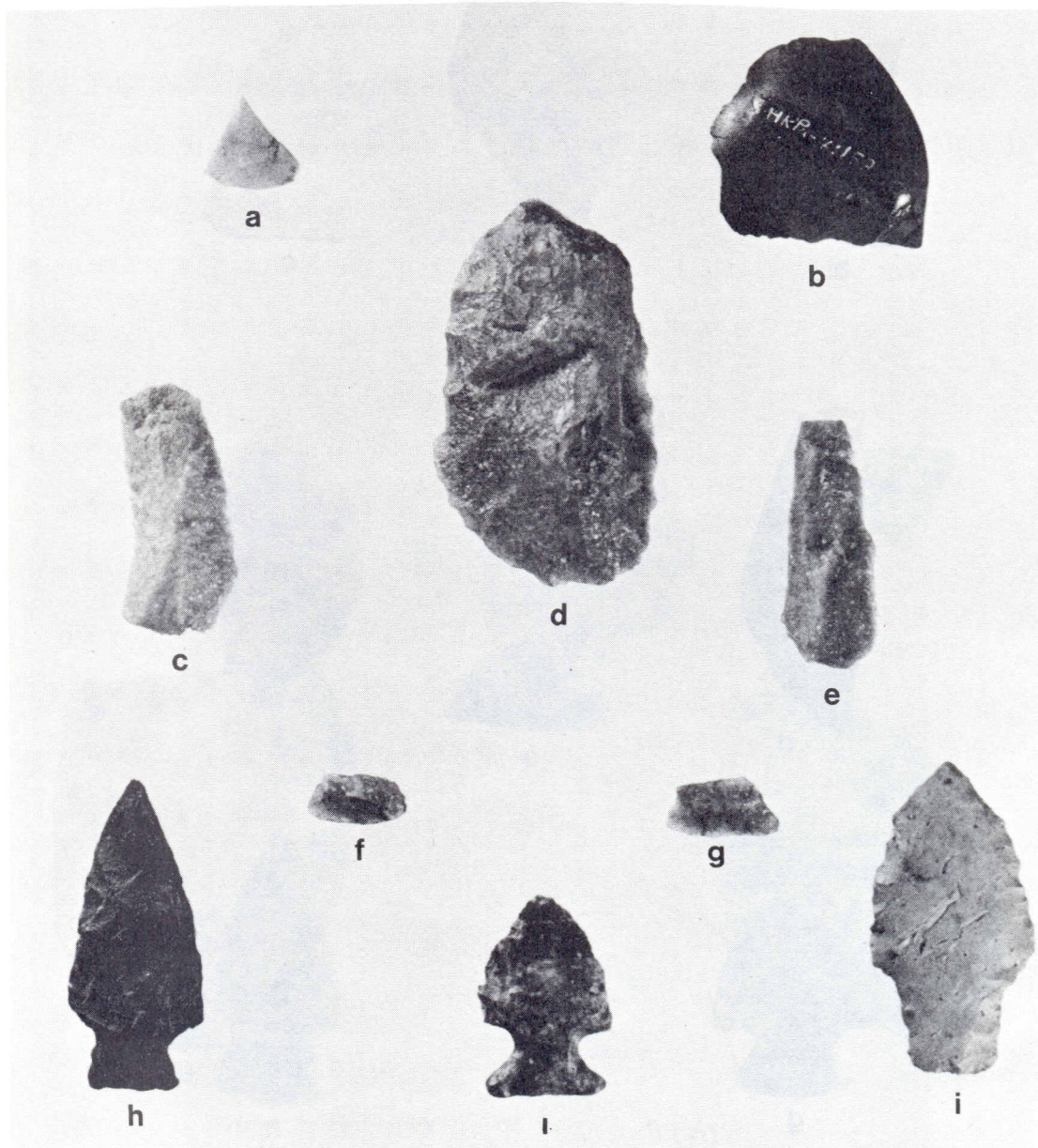


Plate X  
Eaglenest Lake (HkPa 4)

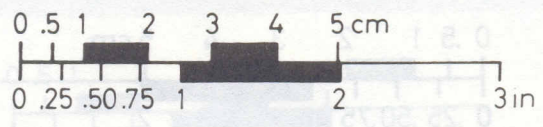
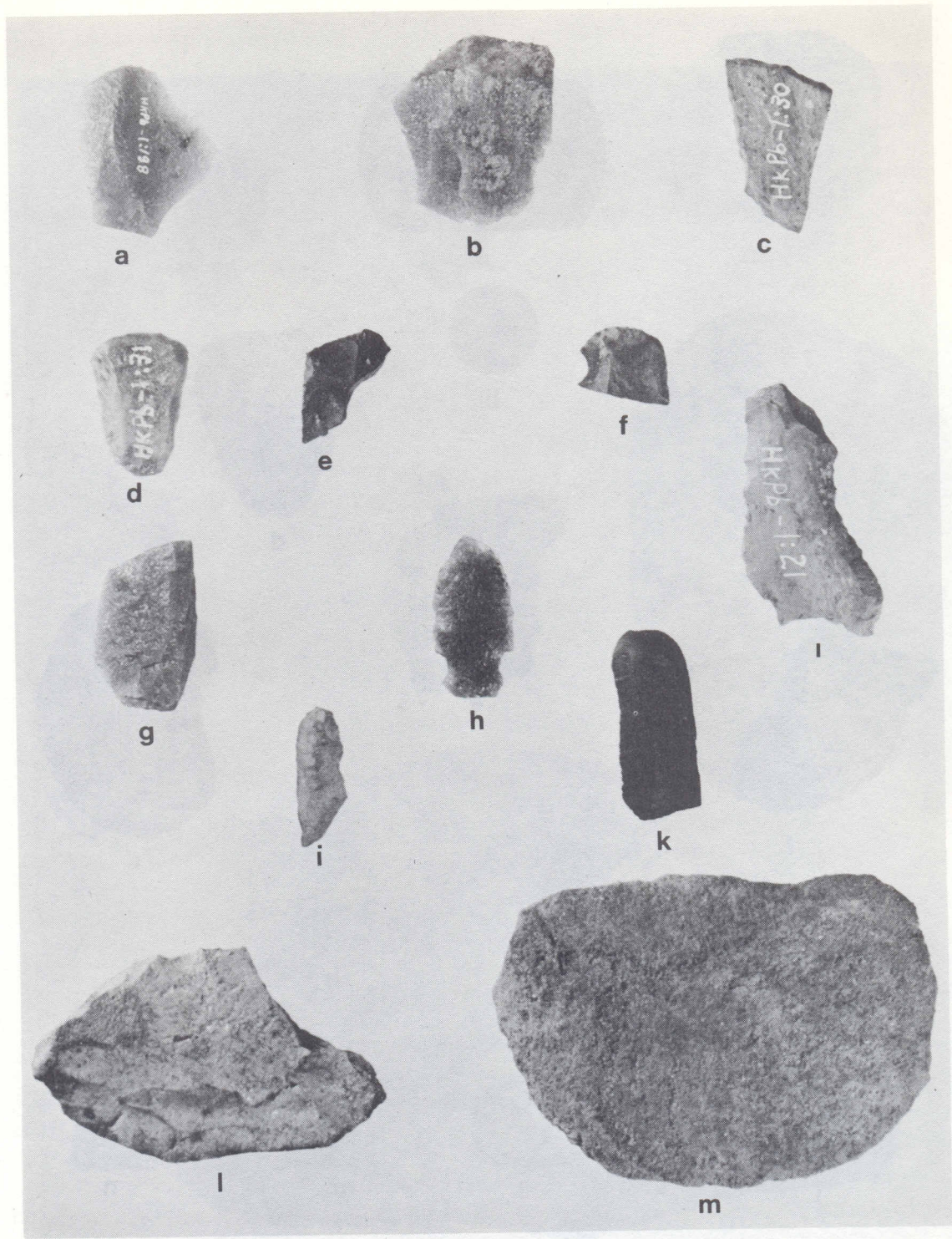


Plate XI  
Eaglenest Lake (HkPb 1)

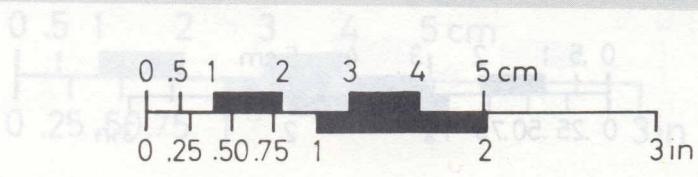
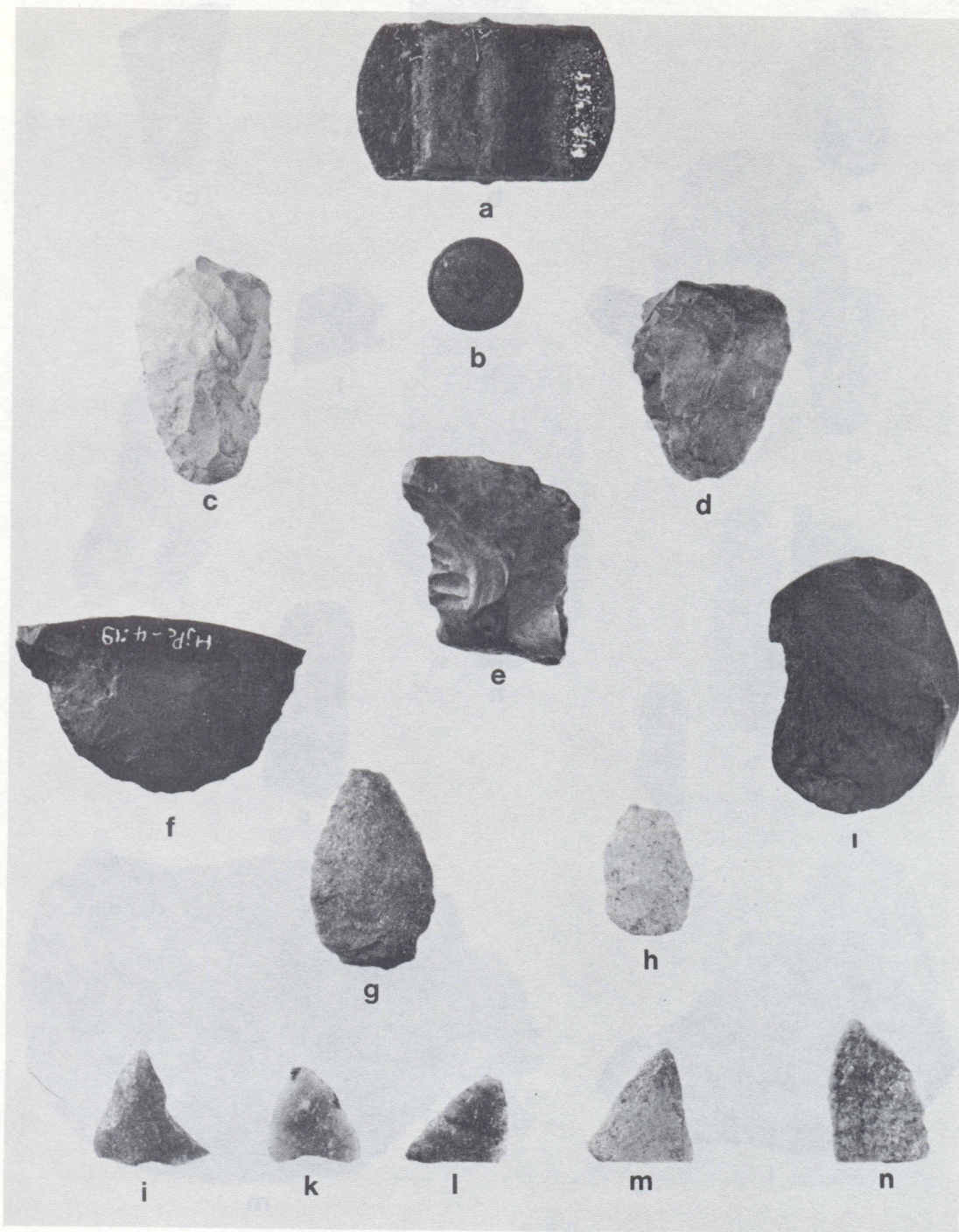


Plate XII  
Big Island (HjPc 4)



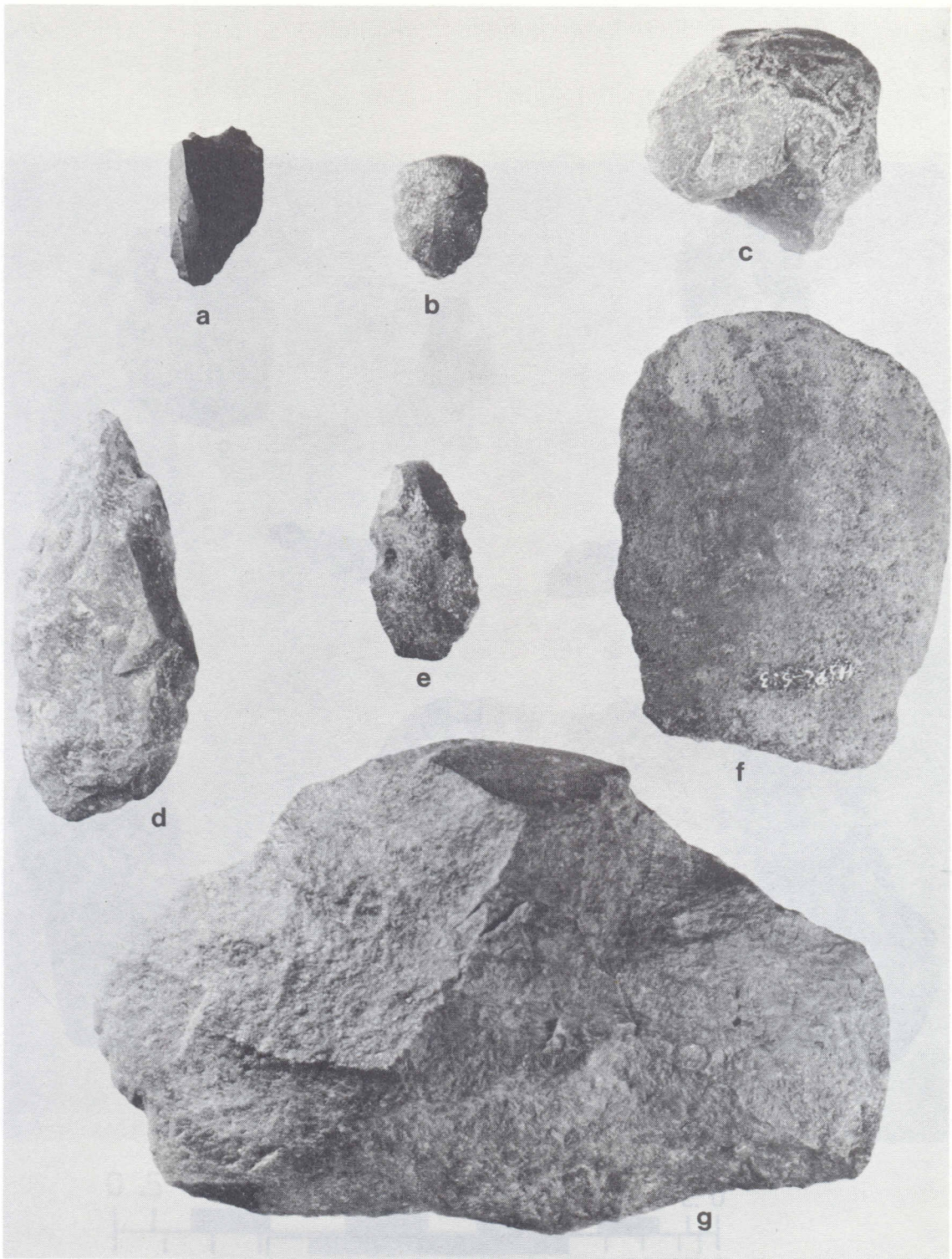


Plate XIII  
Big Island Lake (HjPc 5)



Plate XIV  
HjPc 6 (f), HjPc 7 (e), HjPc 9 (g),  
HjPc 13 (a, b), HjPd 2 (c), HjPd 7 (d)

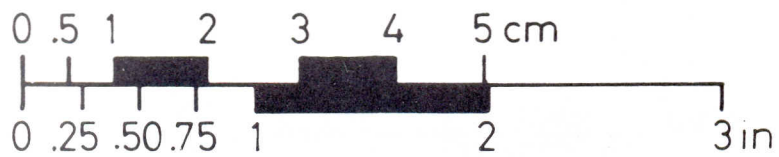
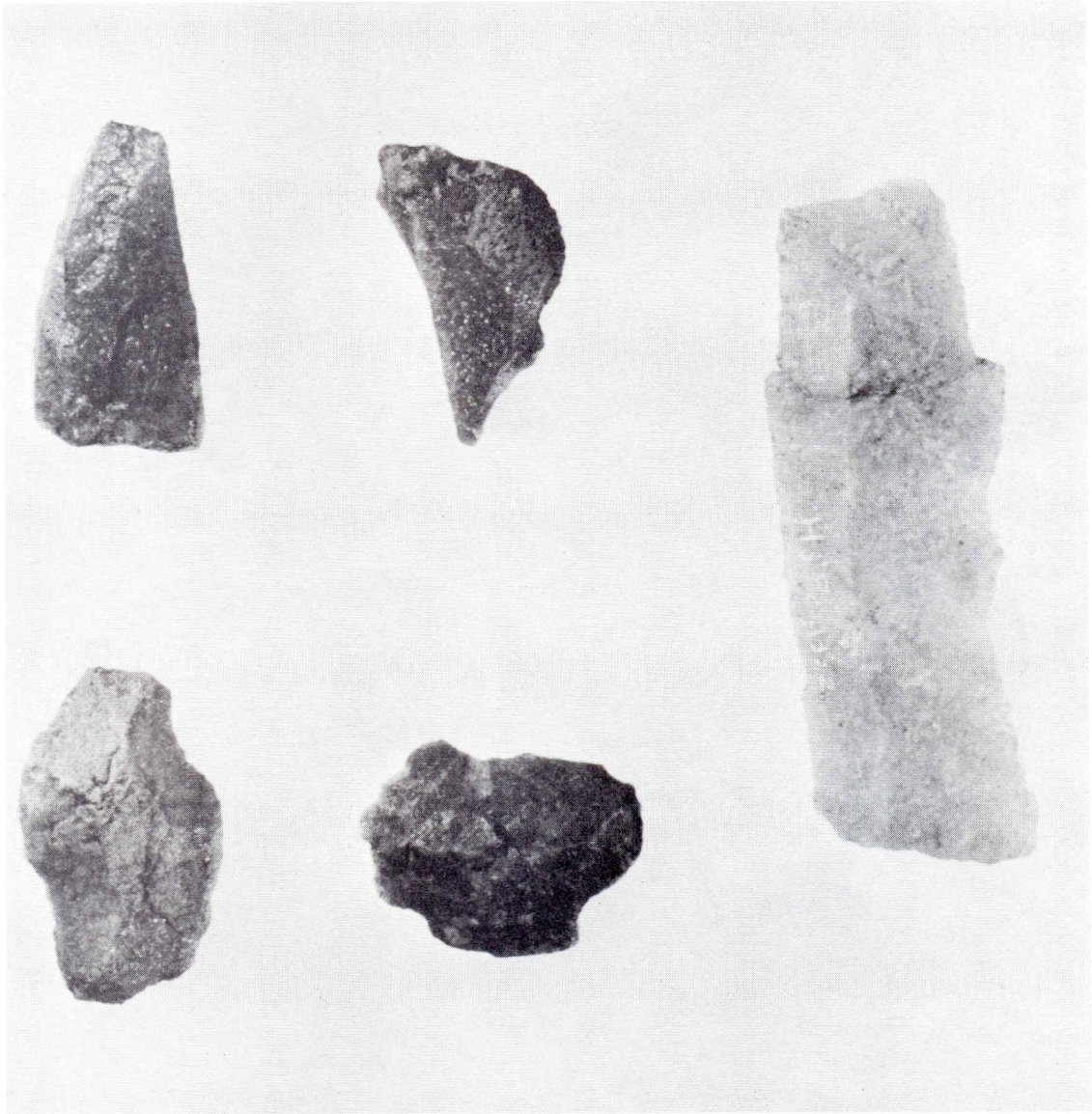


Plate XV  
Big Island Lake (HjPc 13)

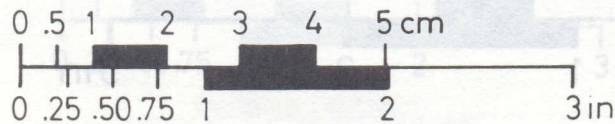


Plate XVI

Gardiner Lake HjPc 14 (a, d-i), HjPc 19 (a, b)