RESEARCH BULLETIN

No. 177 August 1982

Preliminary Prehistoric Sites Survey in Kluane National Park, 1978 and 1980.

Marc Stevenson, Prairie Region, Winnipeg

During the summer of 1980 a team of archaeologists from Prairie Region under the direction of Marc Stevenson conducted the third of four years of archaeological investigations proposed for Kluane National Park, Yukon Territory. While the previous two years of archaeological reconnaissance were concerned primarily with the documentation, assessment and excavation of sites associated with historic gold mining activities (Stevenson 1978, 1979a, 1979b, n.d.) and, secondly, with a preliminary assessment of a number of prehistoric sites on a high alpine plateau in the central region of the park, research activities in 1980 were specifically designed to assess the prehistoric archaeological potential of a number of key regions of major planning significance within the park. Although several minor areas important either from a planning or archaeological perspective were investigated briefly, most survey activities were concentrated in the four largest cross-cutting valleys, lying between the Shakwak Valley and the Kluane ice-fields, within the park. The Slims River Valley, the Mush and Bates Lakes-Alder Creek corridor, the Alsek Pass, and the Kathleen-Louise-Sockeye Lakes chain were the focus of most of the field activities. These areas have recently been identified as the major areas in which the development of public access systems and recreational areas will proceed as they appeared to be the most favourable areas in the park for the location and recovery of archaeological resources. Over 90 percent of the remaining park area is impenetrable due to high relief or glacial phenomena.

The ultimate objective of research in 1980 sought to establish guidelines, in the face of development, for the adequate protection and interpretation of some of the more significant and sensitive prehistoric sites identified within these areas. In conjunction with this objective a number of

secondary goals guided archaeological investigations in 1980. These included the following.

1) Supplementing and refining the regional prehistoric cultural sequence and chronology as proposed most recently by Workman (1978).
2) Locating and collecting obsidian sources and/or sites containing obsidian in an effort to augment data previously gathered in 1978 on obsidian procurement and distribution (exchange?) patterns in the Kluane area.
3) Determining the impact of exploration and gold rush activities upon traditional land use patterns in the Kluane region.

This report, as well as summarizing the results of this past year's investigations, will also present the preliminary findings of the brief archaeological reconnaissance undertaken in 1978. Each will be discussed in turn.

Archaeological Reconnaissance 1980

Generally, fieldwork in 1980 was conducted by a two-man team, periodically assisted by a park warden. Survey procedures were contingent upon logistical considerations and depended on terrain and ground cover. Survey strategies involved a number of complementary procedures, each designed for the maximum recovery of archaeological sites within specific environmental features.

Lake shores were initially surveyed by boat. Where bluffs, rock outcroppings, lake benches, flat well-drained areas or other features amenable to the discovery of archaeological resources were located, inspection was undertaken on foot. Ground survey in these areas was limited to a distance of approximately 30 metres back from the present shoreline. With several minor exceptions lake shores were visually surveyed in their entirety. However, because most shorelines were either dominated by low lying marsh or steep rubble slopes, only a small percentage of each lake was actually intensively investigated on foot. Ground survey was conducted along most rivers, roads and trails. Again, all exposures and areas suitable for the location of prehistoric sites and their subsequent recovery were intensively surveyed. In order to determine the presence of buried sites in "favorable" spots not demonstrating surficial evidence of past settlement anywhere from 8 to 12 0.35 x 0.35 m test pits were excavated by trowel and/or hand shovel at each location.

Slims River Valley Survey

The Slims River Valley is located approximately 70 kn north of Haines Junction. This valley is a large braided outwash channel of the Kaskawulsh River. Water from the glacier and adjoining mountain streams cuts through these valley deposits

for a distance of 16 km before flowing into Kluane Lake. With the exception of several locations at the base of Observation Mountain contiguous to the Kaskawulsh Glacier, all well-developed terraces, exposed benches, sand dunes, gravel fans, bluffs, rock outcrops and other "favorable" areas between the lake and the glacier on both sides of the Slims River were surveyed by foot. While the former area appeared to have the highest potential for the location and recovery of sites, it was, and has been for several years, occupied by a rather large aggressive male grizzly. Subsequently, survey was postponed in this area until some future date.

Although the historic period beginning with the discovery of gold on Bullion Creek in 1903 up to the present is well known (Stevenson 1979a, n.d.) no evidence of prehistoric settlement has been recovered in the valley. There have been, however, several reports of native copper implements being found in sluice boxes on Sheep Creek (Larry Tremblay, Chief Park Warden, pers. comm.).

Archaeological survey in the Slims River Valley located three prehistoric sites as well as a number of previously unrecorded historic sites, most of which appear to date to the 1930s and 1940s. One site at the mouth of Canada Creek, however, may date to early gold rush activities in the Slims River Valley in 1904. Two prehistoric sites were located on the north side of Vulcan Creek while the remaining site was recorded on the east side of Sheep Creek (see Figure 1 for site locations).

The latter site is comprised of three small pockets of flakes on a rock bluff 200 metres west of and ca. 35 metres above the Sheep/Bullion access road. The first cluster consists of one basalt blade-like flake and several speckled chert flakes while the two remaining clusters are composed of two secondary flakes each. Despite subsurface testing, no other cultural material was noted. The site's excellent vantage of the Slims River Valley and considerable evidence of extensive sheep browsing activity in the immediate area combine to suggest that this site may have been utilized in prehistoric times either as a lookout or a temporary hunting station.

A small scatter of six green chert flakes and several fragments of calcined bone, 12 m^2, was recorded on rock outcropping 10 m above creek bed, 2.7 km from the mouth of Vulcan Creek. Surficial survey and subsurface testing failed to locate any other associated materials.

Immediately below this rock outcropping and to the east a bifacially flaked chert knife with evidence of hafting (Figure 2a) and a primary flake of the same material was recorded eroding out of a small bench, one metre above the creek bed. Although no other cultural materials were found in association, substantial disturbance of this deposit by historic camping activity (hunting camps) and extensive erosion suggest that the original size of the site may have been considerably larger than at present.

While the paucity of prehistoric sites in the Slims River Valley was at first surprising such a finding does make sense in retrospect as it appears that the valley offers few resources that more attractive areas better suited to settlement in the Shakwak Valley could not provide. Several exceptions to this, however, may have been the presence of native copper on Sheep and Bullion Creeks, and sheep on the slopes above Vulcan and Sheep Creeks. That the latter creek was named for obvious reasons in 1903, together with the high frequency of contemporary hunting camps recorded on the former creek, suggests that sheep hunting activities may have considerable time depth in the Slims River Valley. That no sites related to the procurement of native copper were recorded on Sheep or Bullion Creeks is probably as much a function of the relatively low visibility of the material record left behind as by such activities as the extremely variable nature of the water level in these glacier-fed streams.

Kathleen, Louise and Sockeye Lakes Survey

Access to this system of lakes, which lie in a glacially scoured basin approximately 25 km southeast of Haines Junction, was gained from the Kathleen Lake campground and boat launching area, just off the Haines Highway. Due to extensive low lying marsh and steep scree slopes on the margins of all three lakes few areas amenable to the location and recovery of prehistoric archaeological resources were located. Those areas which appeared promising, however, included several sandy terraces or shorelines associated with the former glacial Lake Champagne on the northern margins of Kathleen Lake, the Kathleen River outlet at the west end of the lake, the beach and campground areas on Kathleen Lake, several streams adjoining all three lakes, the east and west ends of Louise Lake, and the northeast corner of Sockeye Lake. All these areas were intensively surveyed as were all existing and proposed day-use and camping facilities within the valley.

While historic mining and camping activities were recorded on all three lakes, prehistoric sites were only noted on Kathleen Lake (see Figure 1). Perhaps the most significant site recorded on this lake is located on the east side of a small bay in the vicinity of the day-use and boat launching areas. Two primary flake concentrations were noted; one on top of a 3 m bench south of the access road and the other 10 m north of the road along an old creek bed. Although a number of primary and secondary chert and obsidian flakes were recorded, a bifacially flaked knife (Figure 2b) and unifacially retouched chert flake were the only tools noted. Unfortunately, it appears that park and campground activities have destroyed much of the original site area which is estimated to have been 300 m^2. All materials were collected because of their extremely disturbed context and highly exposed or visible nature.

Because the bay on which this site is located is reportedly one of the most concentrated spawning areas for sockeye in the lake (Wickstrom 1977, cited in French 1980), that this site may represent the remains of a major fishing camp occupied perhaps seasonally over a long period of time should be considered. However, extreme surficial and subsurface disturbance of the site has obliterated all but a vestige of the site and its potential interpretive and archaeological significance.

Three smaller campsites and an isolated find account for the rest of the sites discovered on Kathleen Lake. The latter site is represented by a single broken obsidian projectile point (Figure 2c) located on an access road 1.7 km south of the day-use area, 30 m above the present lake level. That no associated materials were recovered despite extensive subsurface testing suggests that the point represents a single (hunting?) event.

On the same road, 2.5 km from the day-use area, a 150 m^2 scatter of green chert flakes and fragmentary calcined bone was recorded. Subsurface sampling indicated that the site was surficial in nature and that over 90 percent of the area had been disturbed by the road cut. This site may be interpreted as a temporary campsite, possibly associated with fishing activities of a considerable time depth. Terracing and wave cutting in this area indicate that the lake level would have been considerably higher than at present.

Another severely disturbed site was found 540 m south of the above site on the same road in a grader cul de sac. With the exception of one chert flake all recovered lithic material was obsidian. One tool, a broken thumbnail scraper, was collected. Over 90 percent of the original size of the site (ca. 270 m^2) is estimated to have been destroyed by large earth-moving equipment in this turn-around area. No further in situ cultural material was found in association.

The last site recorded on Kathleen Lake was located at the west end of the lake 300 metres upstream from the creek mouth. Two green chert flakes were found on top of the creek bank in a small clearing of sand. Extensive subsurface testing yielded no additional materials. The lack of prehistoric remains in this "favorable" location (this creek and its confluence with Kathleen Lake were predicted to yield a substantial amount of materials relating to a transitory fishing camp) may be more a function of erosional processes occurring at the creek mouth during periods of high run-off than a reflection of past settlement.

Judging by their location and the paucity of materials recovered, most sites on Kathleen Lake may have been associated with temporary fishing activities. Only the extremely disturbed site in the vicinity of the day-use area appears to have any possible time depth. The fact that most of these sites were discovered in disturbed situations such as roads and recreational areas suggests that more sites may be located along the shores of the lake by extensive systematic subsurface sampling procedures.

Mush and Bates Lakes-Alder Creek Survey

The Mush and Bates Lakes-Alder Creek corridor is located in the southeastern region of the park, ca. 40 km southeast of Haines Junction. Access to this area was supplied by four-wheel drive and boat. The potential for recovering archaeological sites on features accessible from the access road from the Haines Highway to the east end of Mush Lake appeared generally low because of dense alder vegetation, and an extensive swamp 7 km east of Mush Lake. Moreover, the Alder Creek braided gravel fan appears to have disturbed much of the valley bottom for several kilometres. On the other hand, a number of features on Mush and Bates Lakes appeared to be more amenable for the discovery of archaeological resources. These included: several well drained areas on the east and west ends of Mush Lake; a series of bluffs and terraces on the north shore of Mush Lake; the Mush-Bates Portage and beach area; a number of beach exposures and rock outcrops on the west side of Bates Lake; a large level grassy clearing on the southwest end of Bates Lake, and the entrance to the Bates River. The remaining shorelines of both lakes were dominated either by swamp or steep slopes, which did not appear conducive to the location and discovery of past settlements and were subsequently not surveyed. All areas that were surveyed by foot, however, underwent extensive surficial survey and subsurface testing. Although a considerable amount of historic mining and hunting activity was noted no prehistoric sites were recorded on either lake.

The apparent lack of prehistoric resources recorded in this valley system probably reflects more the limitations of the sampling strategy employed than the effects of erosional processes. That the paucity of prehistoric sites reflects prehistoric land-use patterns should also be considered, although more systematic survey will need to be conducted before this issue is resolved.

The Alsek Pass

The Alsek Pass is defined as that area in the Kluane Ranges cut by the Dezadeash River. The Pass, which provides access to most of the major unglaciated area in the interior of the park, is located 10 km west of Haines Junction and travels for 10 km in a southwesterly direction before it meets the Kaskawulsh River at Beachview Creek. The confluence of the Dezadeash and Kaskawulsh Rivers marks its termination and the beginning of the Alsek River. With the frequent surging of the Lowell Glacier on the Alsek River 40 km downstream over the past several hundred years or more the Alsek River has been damned creating numerous lake levels. At least five (Claque 1979) and perhaps seven or more (V.N. Rampton and J.J. Claque pers. comm.) lake levels or phases of neoglacial Lake Alsek have been identified by the presence of beach ridges at various elevations in the pass. The last major drainage event of Lake Alsek appears to have occurred about 130 years ago (Kindle 1952) (Rampton n.d.). However, ethnographic information collected by Johnson and Raup (1964: 34) and Tarr and Martin (1914: 158 cited in Claque 1979) may possibly indicate that minor phases

of neoglacial Lake Alsek occurred in 1890 and 1909. It is noteworthy that the 1850 estimate for the last drainage of the lake is supported by Indian legends of a catastrophic flood on the Alsek River delta in southeastern Alaska caused by the "breaking of a glacier" crossing the Alsek Valley in 1852 or shortly before (Laguna 1972: 276).

A combination of foot, vehicle and aerial survey of the most "favorable" areas in the pass (i.e., the last two lake levels on the northwest side, a sand dune area 1.5 km east of Sugden Creek, and the high terrace west of Bear Creek) revealed,not unexpectedly, very few archaeological sites. With the exception of a number of stone adze cut trees (Jack Shick pers. comm.) reported in the vicinity of Sugden Creek no prehistoric or early historic sites were recorded. Several historic sites representing the remains of recent hunting activities were, however, noted. A crudely hewn and weathered wooden paddle recovered by Claque (1979) in 1978 associated with driftwood of the last major draining event of the lake is perhaps the oldest artifact reported from the valley.

The lack of prehistoric sites in the pass appears to be a function in part of several erosional processes. Extensive braiding and erosion at the confluence of the Dezadeash and Kaskawulsh Rivers, constant aggradation and degradation of the sand dune area due to strong winds originating from the glaciers, and slumpage on the steeper slopes of the valley (affecting all but the most recent beach levels and wave-cut benches) would have destroyed or buried most existing archaeological sites.

Other Surveyed Areas

A number of other areas in the park were also surveyed by a combination of foot vehicle and aerial reconnaissance either because of their present and proposed accessibility to the public or their potential for the location and recovery of archaeological resources. These areas include St. Elias Lake, Quill Creek, Congdon Creek, Jarvis River Valley, Onion Lake and the mountain slopes above Haines Junction. Unfortunately, because of erosional processes and/or lack of ground survey (for logistic reasons) in these areas no prehistoric resources were located. The lower Jarvis River Valley near the Alaska highway, however, was considered to have the most potential for the recovery of prehistoric sites as Stan Van Dyke (pers. comm.) and Ron Chambers (Park Warden, pers. comm.) have recovered two isolated artifacts and an obsidian biface from this area.

Recorded Sites Adjacent to Kluane National Park

A number of areas and sites, one of which had been previously recorded by park staff, were investigated this past summer because of their proximity to the park and their potential for understanding prehistoric land use within the park and

thus inclusion into the interpretive program. These include Bear Creek in the Dezadeash River Valley and an early historic or protohistoric cache and associated brush huts 200 m northwest of the present Haines Junction airfield. Three sites, two of which may be associated caches dating to the early historic period (i.e., 1890-1905) in the area, and an isolated chert flake were recorded on Bear Creek. The size and exposed location of one of these cache-like features, however, suggests that it may have been a grave-house.

Clearly, the most significant site recorded outside of the park is the collapsed cache previously reported by Mr. Brent Liddle, park naturalist (pers. comm.). An associated hand-beaten copper lid and a large steel can with native copper riveted handle attachments and associated lid indicate an early historic or protohistoric age for the cache. The elevation and location of this site also indicate that it might have been the cache documented by Johnson and Raup (1964: 43). Apparently, a young Indian about 35 years old at the time of their visit (mid 1940s) was sent to find the cache built many years previously by his father on a knoll east of Pine Creek on the shore of a lake, which Johnson and Raup (ibid.) suggest might be the last phase of glacial Lake Alsek dating to 1890. The deteriorated remains of four traditional Southern Tutchone brush huts and a lean-to were also recorded about 0.5 km west of this cache. Although no diagnostic artifacts were found associated with this site, the spruce logs and boughs of these structures have been cut with a metal axe, suggesting an association with early historic activities and perhaps the previous site.

All sites discussed above are presented in greater detail in French's The Prehistoric Archaeological Potential of Localities of Kluane National Park, Yukon Territory (n.d.).

Archaeological Reconnaissance 1978

During the summer of 1978 the writer was shown a handful of obsidian chips (collected by Mr. Brent Liddle) from the top of a rock outcrop in a high alpine valley above the Kaskawulsh and Dusty Rivers in the interior of the park. Out of the literally thousands of pieces of obsidian observed on the surface of the site by Mr. Liddle, he collected five, two of which were tools of unquestionable human manufacture, making this find the first prehistoric site to be discovered within park boundaries. Together with the sheer volume of obsidian, which suggested that this site may have been located near a major source of the material, perhaps one of the as yet unidentified obsidian sources in the southwest Yukon, this discovery prompted a brief investigation of the site and immediate area following the completion of regularly scheduled fieldwork in 1978.

The writer and his assistant, assisted periodically by a park warden or naturalist, spent approximately a week recording the site and surveying other rock outcroppings and potential sources in the area. One source of obsidian and twelve lithic (obsidian) scatters were eventually recorded in this high alpine plateau. The largest and most heavily utilized sites, however, were found in a small valley cut by the stream draining Airdrop Lake-a small glacial lake at the terminus of an ice lobe originating from Snowshoe Peak. The densest obsidian scatter, interestingly, appears to be that which Mr. Liddle first discovered. The decision was then made to concentrate most of our activities at this site.

The Airdrop Lake site is located 1.6 km above sea level, 1.5 km due north of Airdrop Lake on the most prominent knoll of a large granitic ridge paralleling the stream. Although a large number of flakes were observed directly on the surface of bare rock most of the 75 m^2 lithic scatter was noted directly on top of the few grassy moss covered areas on the knoll. With the exception of about one month of the year average daily temperatures are below the freezing point and winds greater than 30 km/h constantly blow off the glacier.

While the excellent view offered by this location, which takes in more territory than any other rock outcrop recorded on the plateau,indicates that the site may have functioned as a hunting lookout, perhaps for caribou (caribou, which is not present in the region today, has been found associated with another site in the valley), the sheer quantity of flakes recorded on the surface of the site suggests a different function for the site. This finding, as well as the discovery of a source of obsidian nodules in a stream 1.2 km northeast of the site at the base of Hoodoo Mountain, on the other hand, seems to suggest that prehistoric man may have come to this relatively inhospitable valley primarily for the procurement of obsidian.

Site Function

Although it appeared important to answer such questions as whether the site represented a single or multiple occupation, the majority of fieldwork and subsequent analysis centered around determining the major function of the site as the resolution of this issue appeared to have broader regional ramifications. If hunting related endeavours such as the maintenance of weapons (witnessed in, among other things, a large number of utilized and retouched flakes) were found to be the major activity this would seem to suggest that prehistoric man came to this high alpine valley not so much for the procurement of obsidian, but for hunting. Such a finding would in turn indicate that the obsidian source(s) in this valley were of only secondary importance to prehistoric populations living in the Shakwak Valley. Conversely, if the reduction of obsidian nodules and the preparation of tool and

biface preforms (evidenced in reduction flakes, exhausted cores, broken bifaces, shatter and other lithic debitage) was found to be the major activity of the site this would suggest a secondary emphasis on hunting which would subsequently indicate that obsidian source(s) (not necessarily that one recorded) in this high alpine plateau were of major importance to people living in the Shakwak Valley. While the trace element and hydration layer analyses which are currently being proposed for site materials should go a long way towards determining site function and history a few findings which at least go part way towards resolving these issues can be tentatively offered.

The surface of the Airdrop Lake site appears to demonstrate four or five concentrated lithic scatters or activity loci. With the exception of the northeastern area of the site where soil deposits are somewhat deeper (ca. 10 cm) there seems to be relatively little vertical depth to the cultural deposits. Because of temporal restrictions only the two southernmost scatters representing an estimated 40 percent of the surface and surface/subsurface materials were excavated (Figure 3a). The three-dimensional provenience, as well as the angle, slope and directional orientation of all flakes, were recorded. Among the information gained by this labour intensive procedure was a better understanding of post-depositional site disturbance (natural formation) processes and the discovery that over 95 percent of the underside of all flakes demonstrated the thickest hydration layer.

In total over 1100 obsidian specimens and a single green chert flake were excavated. A preliminary analysis of these lithics revealed that over 90 percent were exhausted cores, core fragments, core reduction flakes, biface reduction flakes, broken bifaces (Fig. 4f,g,i), and related debitage. On the other hand, at least 3.5 percent were clearly utilized or retouched. Unfortunately, almost all the remainder of the sample was too small ($<$1.0 cm) or fragmented to be assigned to either gross category. Moreover, a large fraction of this unidentified sample appears to be the product of frost spalling. While this finding supports the interpretation that the site was a lithic workshop with only a secondary emphasis on activities relating to hunting, which in turn suggests that people came to the valley primarily for obsidian, the number of utilized and retouched flakes may be grossly underestimated due to the writer's inability to distinguish between minimally utilized artifacts and trampled nature-facts. Even conceding all questionably utilized artifacts to cultural modification indicates that less than 7 percent of all lithic materials was used in activities other than stone tool production.

Although there is, as yet, no comparable data from other quarry shops or hunting lookouts in the southwest Yukon, a comparison with several recently excavated quarry sites in Alberta and New Hampshire suggests that tasks not specifically related to core reduction and/or tool/preform manufacture were

a major component of the activities at the Airdrop Lake Site. From excavations at the Mount Jasper lithic workshop in the White Mountains of northern New Hampshire and a quarry site on Beaver Creek in the lower Athabasca River drainage in northern Alberta it was found that less than 0.1 percent (Gramly 1980) and 0.5 percent (Syncrude Canada Ltd. 1974) of all excavated lithic materials, respectively, were designed for immediate on site use. On the other hand, over 3.5 percent, and perhaps more, of all obsidian flakes found at the Airdrop Lake Site were clearly intended for immediate use in activities not normally associated with quarrying and tool production. This, together with the site location on top of a high outcrop 1.2 km from the nearest source of obsidian, suggests that although obsidian may have brought people to this valley, hunting was a major factor in conditioning prehistoric land-use patterns there, at least briefly.

That considerable effort was expended transporting obsidian nodules at least 1.2 km before ascending a high rock outcrop indicates that the occupants of this site were, in effect, killing two birds with one stone and that the single occurrence of either resource may not have been sufficient enough to attract man to the high alpine valley. If so, one would expect that this type of obsidian would occur with less frequency than other types in campsites in the Shakwak Valley. While trace element studies have yet to be conducted several obsidian nodules given by the writer to Stan Van Dyke (of Lifeways) have had their composition analysed, and indicate that obsidian from this source does in fact occur less frequently than other types in several sites in the Shakwak Valley (Stan Van Dyke 1979, pers. comm.).

Site Age and History

Although no culturally diagnostic artifacts were recorded at the Airdrop Lake Site, several microblades (Figure 4a,b) found at hunting lookouts in an adjacent valley indicate that man perhaps may have been attracted to the area as far back as 5,000 to 6,000 years ago--the time when the microblade industry of the Little Arm phase was replaced by the developed bone industry of the Taye Lake phase (Workman 1978). However, because this horizon marker was based predominantly on data from campsites located at lower elevations in the Shakwak and Aishihik valleys (sites in the high alpine areas in the southwest Yukon were not systematically investigated until recently), whether these microblades reflect a considerable time depth for man's utilization of this alpine plateau or merely sampling error (it is plausible that the use of microblades in high alpine hunting camps continued well after their disappearance in valley sites) should be considered.

That the Airdrop Lake Site does not represent a single event but several or more is suggested by the presence of a varying range of hydration layer thicknesses on the artifacts.

Almost all of the material from this site demonstrates a hydration layer on the underside which, by visual inspection, appears to range from minimal to total surface coverage. While this may, in part, be a function of differential exposure to certain elements such as ground water leaching (other variables which affect the rate of hydration on obsidian, temperature for example, appear to be held constant) a small cluster of heavily hydrated scrapers (>75 percent total surface coverage) (see Figure 3b) and a burin (Figure 4f & g) indicate not only that this site may have been a favored lookout on more than one occasion but also that earlier activities may have differed from later ones. This notion is further supported by the fact that over 26 percent of all heavily hydrated flakes on the site were retouched or utilized as opposed to only 3 percent for flakes with lesser hydration layers. Confusing this issue, however, is the fact that, despite differences in hydration layer thicknesses, which suggest a multiple occupation of the site, there appears to be no clear-cut spatial separation between groups of obsidian flakes with varying hydration thicknesses. Generally, there seem to be only two lithic concentrations, each demonstrating artifacts with varying rates of hydration. However, rather than dismissing this evidence and suggesting that these two concentrations represent a single event, this finding appears to indicate a reoccupation of the same activity loci through time--a finding not totally unexpected considering the limited availability of good seating area (grassy moss covered areas) on this rock. Moreover a refitting analysis revealed that there may be a temporal relationship between the two activity loci (See Figure 3b) as witnessed in the exchange or transportation of several flakes and a broken biface between the two areas. This, in turn, seems to suggest that the site was occupied at least on one occasion by two or more people.

Other Findings

Another finding that appears to be common in other sites related to the procurement of lithic raw materials is the occurrence of a small number of heavily worn, normally curated tools of an exotic material usually foreign to the nearby source. Two heavily utilized scraping tools (Figure 4c & e) of a clear obsidian which accounts for less than 3 percent of the site material by type and is unlike any other found at the source, as well as a worn chert flake appear to represent more a product of initial discard of normally curated tools in favor of newly manufactured ones (Gramly 1980) than actual habitation or on the spot tool use, as some have suggested (Funk 1977a, 1977b cited in Gramly 1980). This interpretation is supported by the fact that one of these tools, a heavily ventrally and dorsally retouched scraper made on a large blade (Figure 4c), was found directly associated with several other large blade-like flakes--flawed in the process of manufacture.

This latter tool is interesting in that it appears to be a multi-purpose tool with two sets of flake scars each with a different hydration layer. That the larger more acute flake scars are much more heavily patinated than the smaller more steeply retouched overlying flake scars suggests that the tool was re-used for a different purpose some time after its initial discard. This appears to all but confirm that the site was a favored hunting location on more than one occasion in the past.

Seasonality

Although there is as yet no direct evidence concerning the season of occupation the severity of weather conditions in this high alpine plateau indicates that occupation of the site in any season other than summer would have been extremely uncomfortable. Moreover, that plant species important to the diets of large herbivores experience a delay in growth and maturation at this elevation (Wright et al. 1980) suggests that hunting would have been the most productive in the summer.

While more excavation and analysis will undoubtedly resolve some of the more problematic issues discussed above, as well as raising some new ones, the Airdrop Lake Site can be tentatively summarized as follows: it was a hunting look-out whose primary and secondary functions, respectively, included core reduction/tool preparation and activities related to seasonal (summer) hunting, occupied on several or more occasions in the past, perhaps as early as 5,000-6,000 years ago.

Conclusions

This brief report has summarized the results of two seasons of prehistoric sites survey in Kluane National Park. Generally, the main objective of research during this past year was realized. Although the actual number of prehistoric resources recorded during the survey was disappointingly small, a few sites on Kathleen Lake will warrant further investigation should development proceed in these areas. For the most part, the lack of prehistoric sites recorded within Kluane National Park appears to be a function of several variables. Erosional processes, and the inherent limitations common to most judgemental sampling strategies both served to blur the picture of man's prehistoric use of the park. Although more work is needed, a preliminary prehistoric land use pattern within the park can be tentatively proposed.

Kluane National Park appears to offer few resources that the less formidable Shakwak Valley could not provide. As a result major campsites are predicted to be rare within park boundaries (the only exception to this may be on the shores of Kathleen Lake). The majority of prehistoric sites within the park, in descending order of expected occurrence, are predicted to be transitory camps or specific activity loci related to: 1) the hunting of major ungulates such as sheep,

moose, caribou and goat; 2) the procurement of obsidian; 3) fishing, and 4) the procurement of copper. While hunting camps are anticipated for most unglaciated areas of the park where large game is present today, sites relating to the procurement of obsidian and copper are expected in the interior of the park (the Duke Depression) above the Kaskawulsh River in geological formations, volcanic in origin, and a number of creeks draining the Donjek and Kluane Ranges into the Slims River and Kluane Lake, respectively. With the exception of sites near the southwest shore of Kluane Lake within park boundaries, fishing camps are predicted to be concentrated in the Kathleen, Louise and Sockeye Lakes system.

Although the primary objective of survey in 1980 was, in part, realized a number of secondary goals guiding research were not. It appears that because of the paucity of prehistoric sites recorded in the park, the goal of supplementing and refining the regional prehistoric culture historical sequence will have to be modified or dropped. On the other hand, data collected during 1978 and 1980 do offer some potential for the realization of the remaining two secondary research objectives. Specifically, while sources of obsidian and sites containing obsidian artifacts hold some promise to better understand prehistoric procurement patterns of obsidian and its distribution in the Kluane area, the early historic cache and brush camp sites adjacent to the park offer some potential for determining the impact of early historic activities upon Kluane's traditional native peoples.

References Cited

Claque, J. J.
1979
"An Assessment of Some Possible Flood Hazards in Shakwak Valley, Yukon Territory", in Current Research, Part B, Geological Survey of Canada Paper 79-1B, pp. 63-70.

French, Diana E.
1980
"The Prehistoric Archaeological Potential of Localities of Kluane National Park, Yukon Territory." Manuscript on file, Parks Canada, Prairie Region, Winnipeg.

Gramly, Richard Michael
1980
"Raw Materials Source Areas and 'Curated' Tool Assemblages." American Antiquity 45: 823-833.

Johnson, F. and Raup H.M.
1964
"Investigations in Southwest Yukon: Geobotanical and Archaeological Reconnaissance." Robert S. Peabody Foundation, Archaeological Papers 6.1, pp. 3-138.

Kindle, E.D.
1952
"Dezadeash map-area Yukon Territory." Geological Survey of Canada Memoir 268, 680.

Laguna, F.
1972
"Under Mount Saint Elias-the history and culture of the Yakutat Tlingit." Smithsonian Contributions to Anthropology 7 (3 pt.), 1395 p.

Rampton, V.N.
n.d.
"Surficial deposits and landforms of Kluane National Park." Geological Survey of Canada Paper (in press).

Stevenson, Marc G.
1978
Inventory and assessment of the Historic Resources of Kluane National Park, Yukon Territory. Manuscript Report Series, restricted edition. Parks Canada, Ottawa.
1979a
"Looking for Gold-Historic Sites survey of Kluane National Park, Southwest Yukon." M.A. thesis, Dept. of Archaeology, Simon Fraser University.
1979b
"Archaeological Investigations of the Kluane Gold Rush." Research Bulletin No. 146, Parks Canada, Ottawa.
n.d.
"Tales from a Three-hole Privy - Archaeology of a Northern Gold Rush." (Manuscript in Preparation).

Syncrude Canada Ltd.
1974
"The Beaver Creek Site: A Prehistoric Stone Quarry on Syncrude Lease No. 22." Environmental Research Monograph 1974-2.

Van Dyke, Stan G.
1979
"Obsidian Procurement Patterns in the Southern Yukon." Paper presented at the 12th Annual University of Calgary Archaeological Conference.

Workman, William B.
1978
"Prehistory of the Aishihik-Kluane area, Southwest Yukon Territory." Archaeological Survey of Canada Paper No. 74, National Museum of Man, Mercury Series.

Wright, Gary A., Susan Bender and Stuart Reeve
1980
"High Country Adaptations," in Plains Anthropologist 25-89: 181-197.

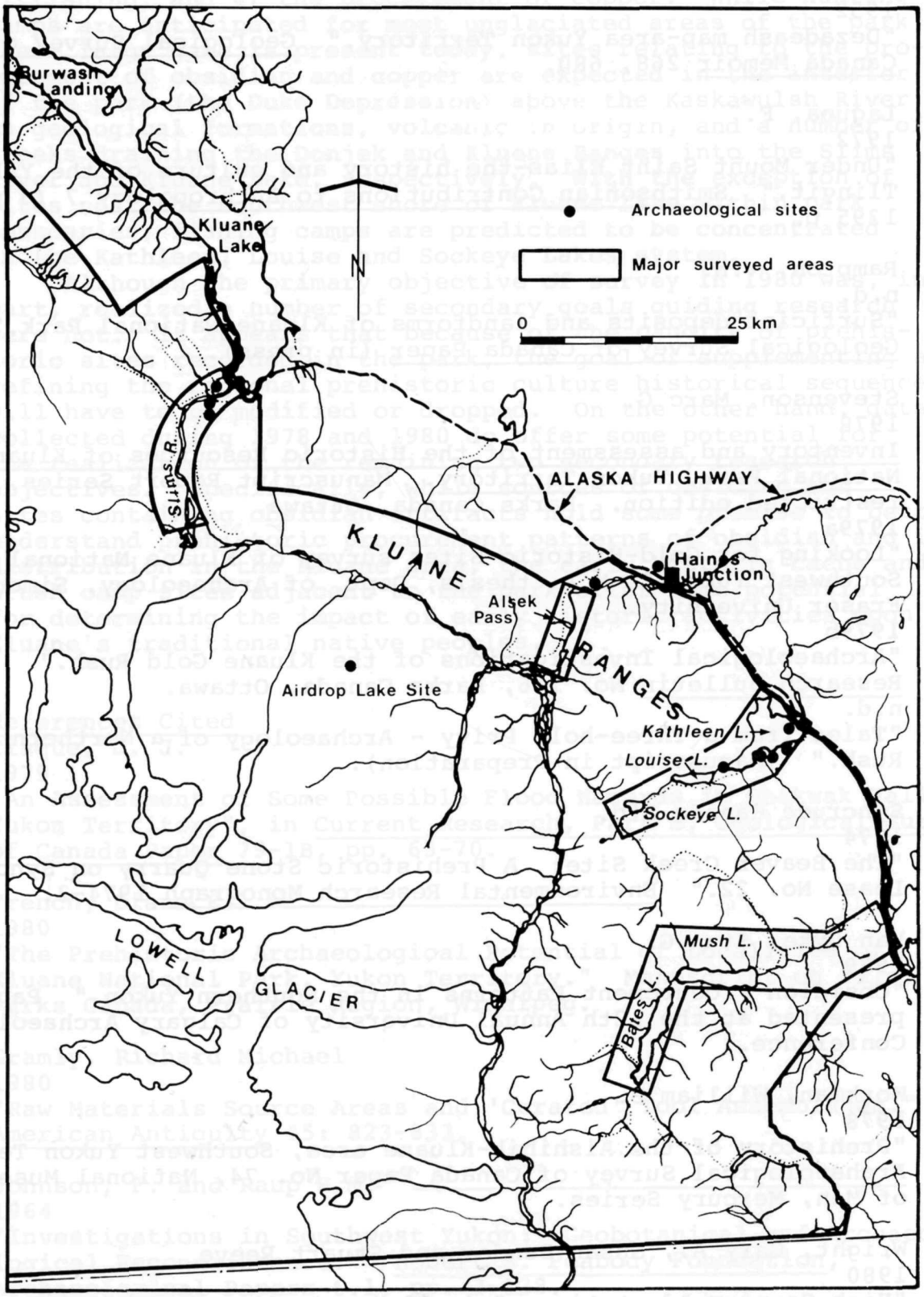

Figure 1. Prehistoric survey areas and site locations, Kluane National Park (drawing by K. Graham-Stevenson).

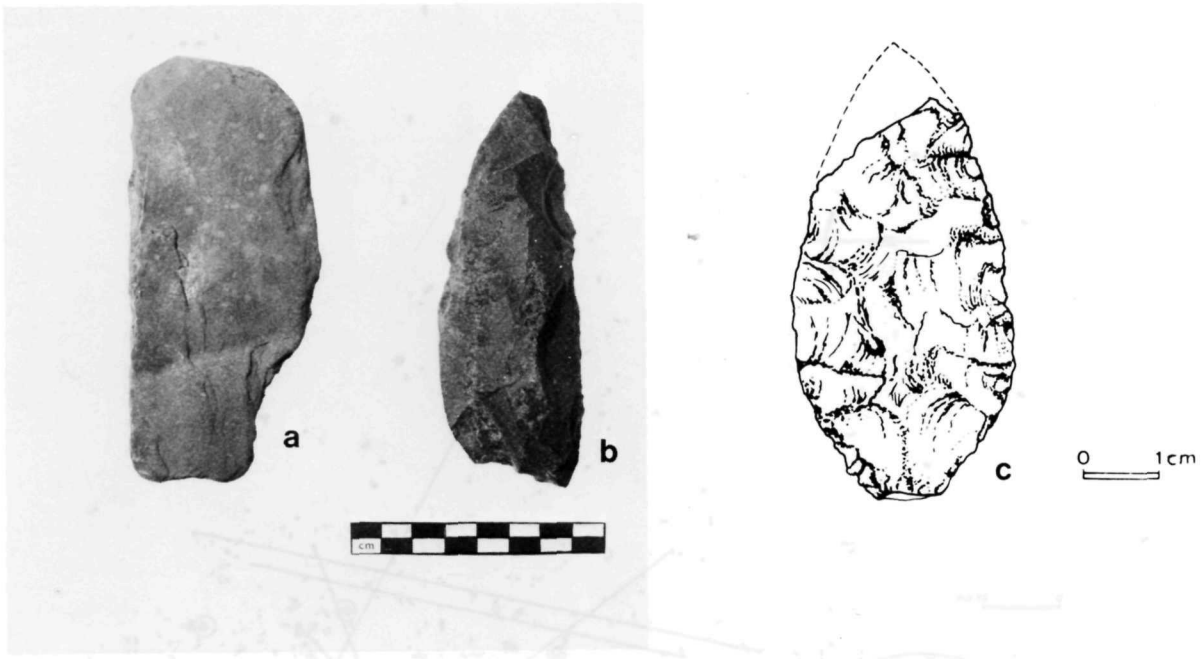

Figure 2. Lithic artifacts recovered in Kluane National Park:
a) biface/knife, recovered at Vulcan Creek
b) biface/knife, recovered at Kathleen Lake
c) obsidian projectile point, from Kathleen Lake.

(Drawing by K. Graham-Stevenson).

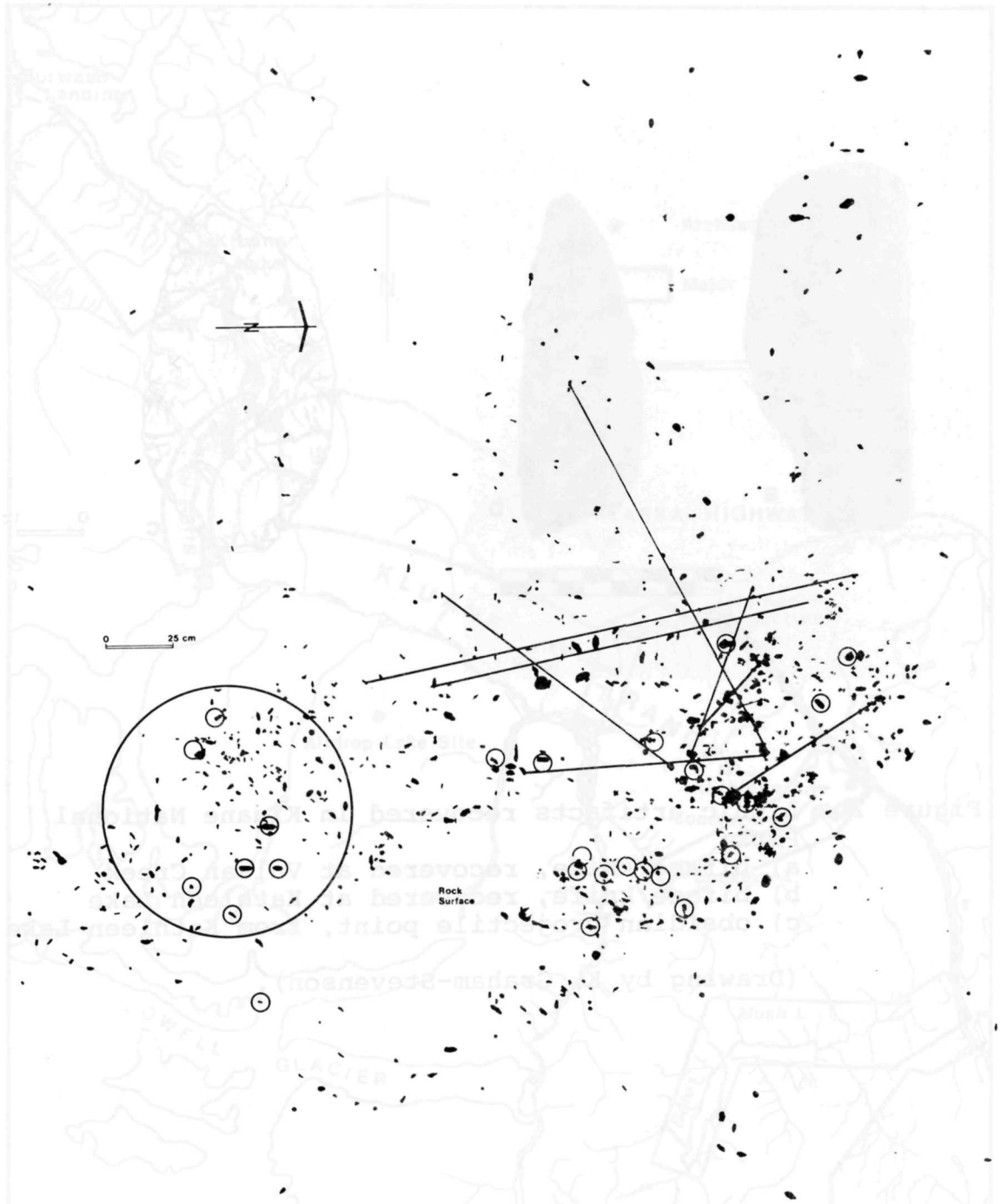

Figure 3a: Airdrop Lake site map. Lines connect crossmends of flakes; small circles represent heavily hydrated flakes; large circle on lower left is an activity area containing heavily hydrated flake tools. (Drawing by K. Graham-Stevenson).

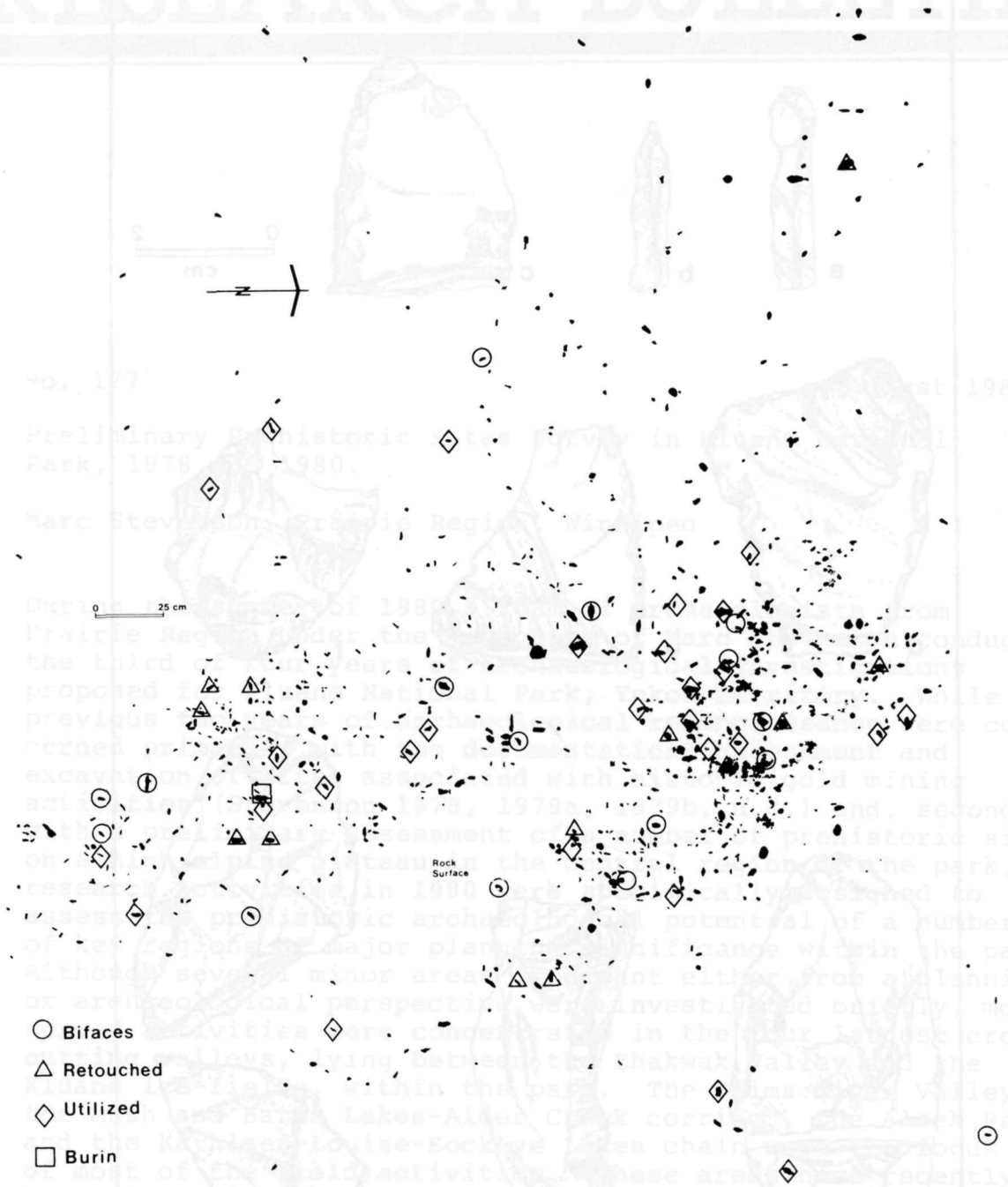

Figure 3b. Airdrop Lake site map showing significant artifacts (drawing by K. Graham-Stevenson).

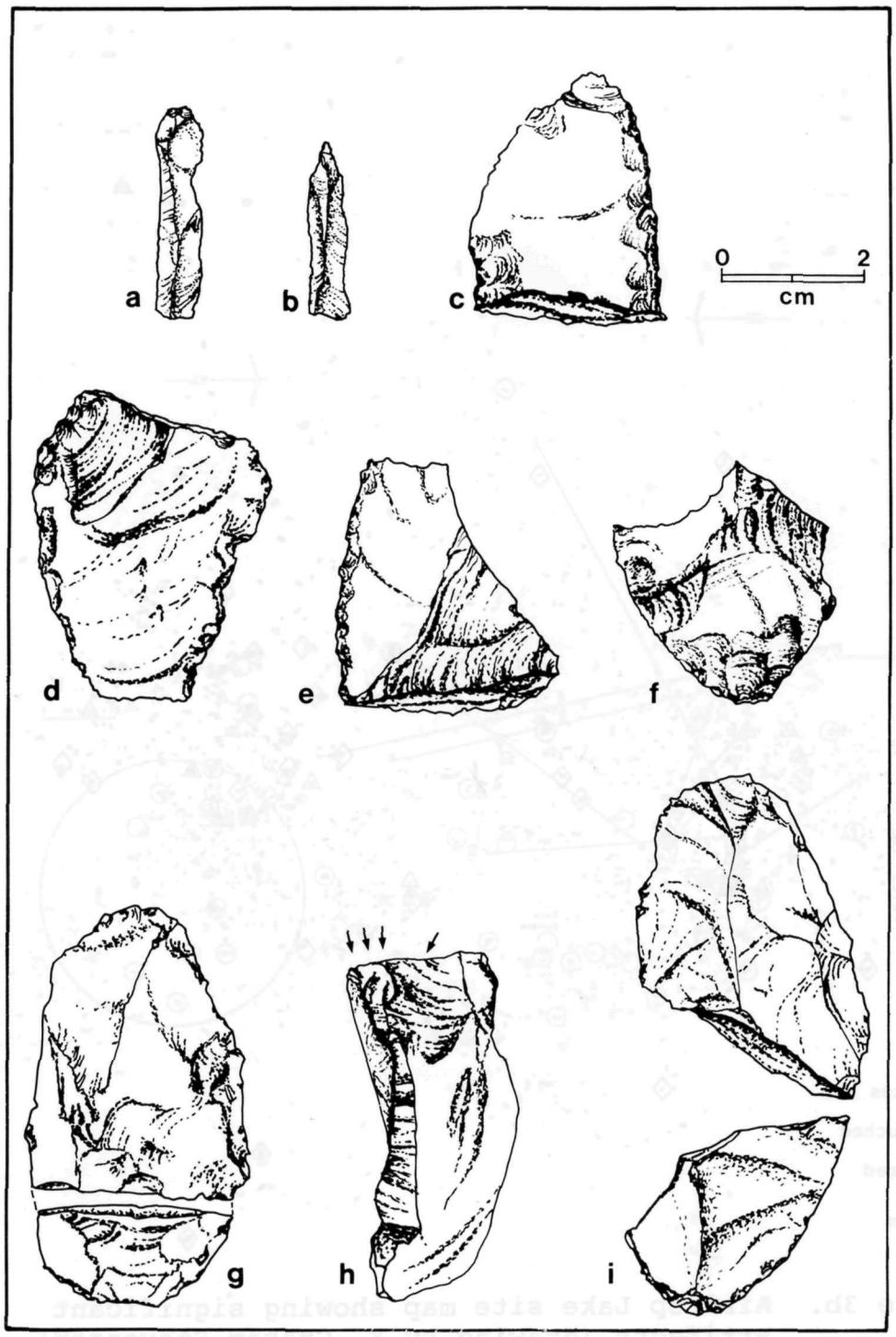

Figure 4. Lithic materials recovered from Airdrop Lake site:
a, b - microblades from other hunting lookouts in vicinity
c, e - two heavily hydrated scrapers of clear obsidian
d, h - heavily hydrated scraper and burin
f, g, i - broken bifaces from Airdrop Lake site.
(Drawing by K. Graham-Stevenson).

ISSN 0228-1228

Published by authority of
the Minister of the Environment

Canada