

# EVIDENCE FROM THE MACKENZIE DELTA FOR PREHISTORIC LINKS BETWEEN ALASKA AND ARCTIC CANADA: THE SATKUALUK SITE

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**Abstract:** Satkualuk is a multi-component site located on Richards Island in the Mackenzie Delta. Artifacts and radiocarbon dates indicate several temporally distinct early occupations. The co-occurrence of linear-stamped ceramics and frequent use of burination techniques on a variety of lithic artifacts indicates a Choris presence at the site. This component significantly extends the eastern boundary of the known Choris distribution, and increases the likelihood of contact and cultural influence between Alaskan peoples and those of Arctic Canada at a time when the Palaeoeskimo tradition in the central and eastern Arctic was undergoing major changes.

**Keywords:** Choris, Mackenzie Delta, Satkualuk, Arctic Canada, Alaska, archaeology, ASTt, Dorset.

## Introduction

Since its discovery nearly a half-century ago on Kotzebue Sound, the Choris culture has remained an enigma. Choris artifacts show intriguing similarities to those from both the earlier Denbigh Flint Complex and later Norton tradition materials (Dumond 2000: 9-13). It may represent a link between the Arctic Small Tool tradition (ASTt) and later cultural traditions, or between Siberian and Alaskan traditions, yet it is so poorly known that its true position and significance are difficult to assess. The discovery of a Choris component in the Mackenzie Delta of northwestern Canada raises the possibility that this puzzling complex may also have played a role in communications between the developing cultures of Alaska and those of the Central and Eastern Canadian Arctic.

The Mackenzie Delta provides a concentration of animal resources that is unique in Arctic Canada, and more closely approaches the resource levels of the riverine and Bering Sea coastal environments of western Alaska. Although the region supported a relatively dense population of Dene and Inuvialuit peoples during the past few centuries, archaeology has been unable to detect more than traces of earlier occupations. This deficiency is in part

due to the geomorphological attributes of the delta terrain, characterized by rapid erosion and deposition of many shoreline areas, as well as to the dense vegetation cover which conceals most surface indications of past occupation. However, the sand and gravel exposures situated at relatively high elevations on Richards Island represent the type of landscape that has produced evidence of early occupations on the Tuktoyaktuk Peninsula to the east of the Mackenzie Delta (LeBlanc 1991a; Sutherland 1991).

In the course of archaeological work on Richards Island during the summer of 1993, a number of locations that appeared to have archaeological potential were observed. One such area was a stretch of the eastern coastline of Richards Island bordering on Kittigazuit Bay. On an exposure north of the large Inuvialuit site of Gupuk, a surface scatter of artifacts that included chert flakes and scrapers was found. Two days of investigation resulted in the recovery of additional chipped stone artifacts, as well as ceramic sherds (Sutherland 1994). The site (NiTs-4) was named Satkualuk, which in Siglit, the language of the Mackenzie Delta Inuvialuit, means "tool from long ago" (Figure 1).

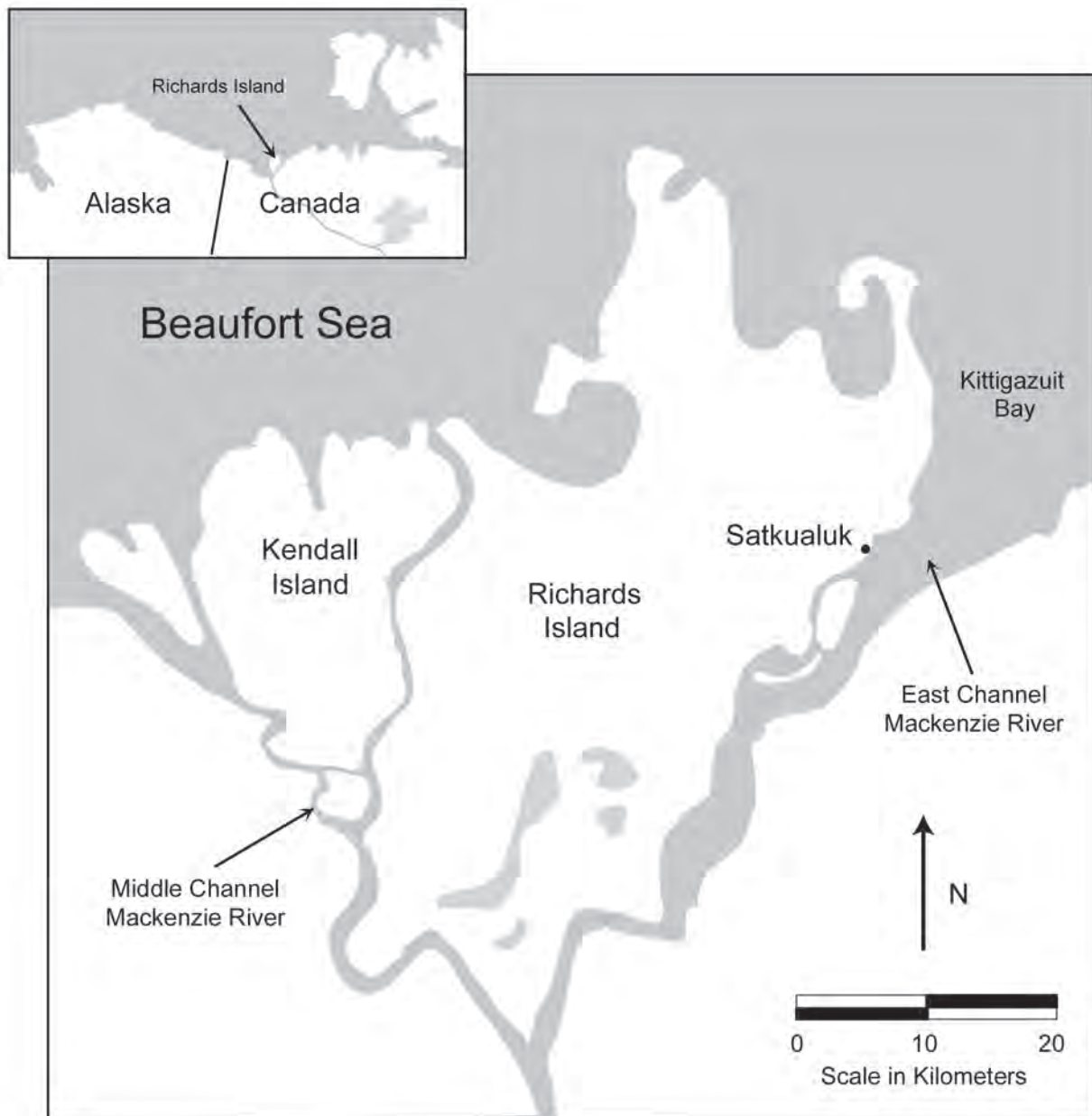


Figure 1: Location of Richards Island and the Satkualuk site (NiTs-4).

The presence of pottery with linear-stamped decoration and the frequent use of burination techniques on a variety of stone tools suggested a similarity to assemblages characteristic of Choris culture of northwestern Alaska (Giddings 1964; Giddings and Anderson 1986). Confirmation of the cultural affiliation of the site would indicate a significant eastward extension in the known range of the Alaskan Choris complex, and in view of the potential importance of the site, further work was carried out in the summer of 1994 (Sutherland 1995). This work included detailed mapping of the site and further test excavations, as well as helicopter and foot survey of surrounding areas. Several days of reconnaissance in adjacent regions of Richards Island resulted in the location of six additional

sites, which yielded lithic artifacts indicative of occupation prior to the ancestral Inuvialuit settlement of the area. This work demonstrated that the Satkualuk site is not an isolated phenomenon, but one of a series of occupation localities along the eastern coast of Richards Island.

This apparent concentration of early sites may be related to a unique feature of the local environment. Friesen and Arnold (1995) delineate a zone occupied each summer by thousands of beluga that congregate in Kittigazuit Bay to feed and raise their infants. This zone approaches the shore of Richards Island along a stretch of approximately 20 kilometers of coast, and the Satkualuk site is located midway along this sector. Several of the other early sites that were

discovered in 1994, as well as more recent ones such as the large Inuvialuit village of Gupuk, are located along this same stretch of shoreline. Such a concentrated resource, when combined with the seal, caribou, and fish stocks of the outer Mackenzie Delta and adjacent regions, may have produced a local environment which early Alaskan hunters would have found attractive for the past several thousand years.

### Site Description

Satkualuk lies close to the edge of the upland which characterizes the northern portion of Richards Island, between 35 and 40 m above sea level and approximately 200 m from the foreshore flats bordering Kittigazuit Bay. Its location provides an excellent view eastwards over the estuary of East Channel. The site is situated in a large blowout surrounded by tundra and shrub tundra vegetation (Figure 2).

in the wind-deflated portion of the site. Five 1 x 1 m test units were excavated in 1993, and an additional twenty-four 1 x 1 m units in 1994. The majority of the excavation units were situated where surface cultural material was most heavily concentrated, and over half of the test units were in the vicinity of a low mound near the eastern edge of the site. Testing was also done around the periphery of the blowout in order to determine the extent of the artifact distribution in areas covered by vegetation.

### Site Features

Apart from several rock scatters in the deflated zone, which may represent the remains of tent rings, the only other feature visible from the surface is a low mound, approximately 15 m in diameter, located on the northeastern edge of the area where surface artifacts were most heavily

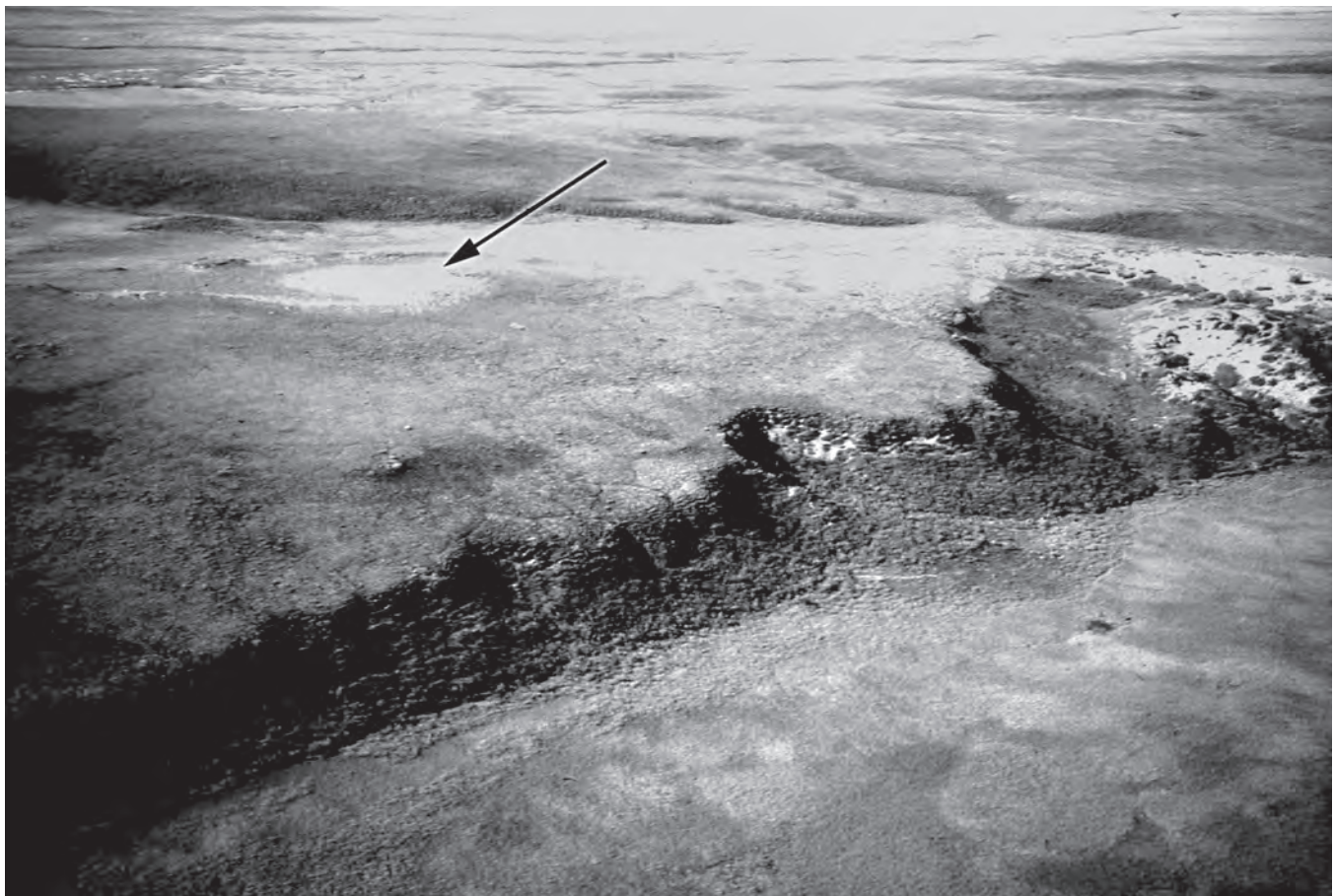


Figure 2: The Satkualuk site from the air.

Preliminary examination of the site locality revealed artifacts scattered over an area measuring at least 250 by 180 m, with a concentration approximately 40 m in diameter. The boundaries of the site were not determined, since the scatter of artifacts extended into areas covered by tundra vegetation. Controlled surface collecting was carried out

concentrated. The periphery of this roughly circular mound supports vegetation cover, and a cluster of boulders lies at its highest point (Figure 3). Excavations revealed a number of hearths, some associated with what appeared to be living floors, at depths of 35-75 cm below ground surface. Four radiocarbon dates were obtained from the buried deposits,

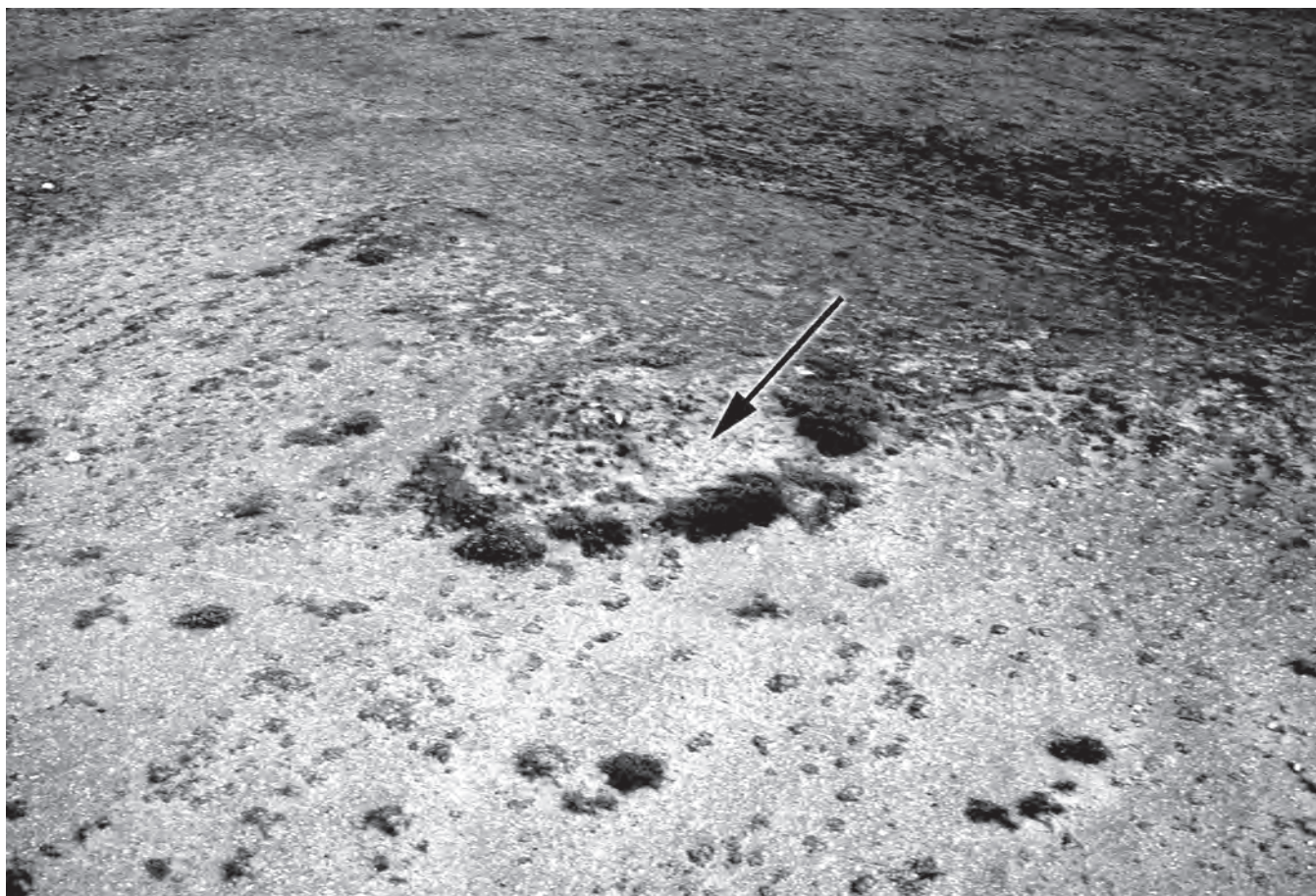


Figure 3: The deflated area of the site, with arrow pointing to the mound feature.

and are consistent with the stratigraphic positioning of the samples. Only a small portion of the mound was excavated and further investigation is needed to assess the nature and extent of the cultural features that were observed.

### Artifacts

Surface collection and excavation produced 1391 specimens, including 37 ceramic sherds and 302 finished lithic artifacts. Most of these were recovered from the wind-deflated areas of the site. Few of the artifacts that were recovered from the buried occupation layers in the mound excavation were diagnostic of cultural affiliation.

The majority of the ceramic artifacts are linear-stamped body sherds (Figure 4*l*) tempered with fiber, possibly feathers; one may be cord-marked (Figure 4*k*). Anderson considers cord-marked pottery to be the earliest type found in Choris culture, while for several subsequent centuries both were made by Choris people, with linear-stamped ceramics continuing into Norton culture (Giddings and Anderson 1986: 315).

Lithic artifacts account for 87% of the finished specimens recovered from Satkualuk. Raw materials used include a variety of cherts, quartzite, and at least one example of clinker (Raymond LeBlanc, personal communication). The presence of clinker, a heat-fused rock that occurs on the Cape Bathurst peninsula (LeBlanc 1991b), suggests that the people from Satkualuk may have travelled or had trade connections as far as Cape Bathurst, almost 300 kilometers east of the Mackenzie Delta.

There are 14 burins in the collection, including specimens not unlike some of those found in Denbigh or other ASTt assemblages (Figure 4*g*), as well as burins on bifaces (Figure 4*b*) which are considered to be more diagnostic of Choris culture. Twenty-two burin spalls were also recovered. Among the most characteristic specimens are 35 burinated flakes and unifaces. Together with linear-stamped pottery, the burinated lithics provide the strongest indication of a Choris presence.

The Satkualuk collection also includes 44 microblades (Figure 4*j*) and 17 microblade cores or fragments (Figure 4*i*). The poor quality of workmanship and the lack of standardization in the cores from Satkualuk are notable

when compared with Denbigh assemblages, and suggest a remnant industry that one might expect in Early Choris. Two core tablets were also recovered. One of these is from a relatively large core, and was found in association with a large microblade, in an area of the blowout located at a considerable distance from the main concentration of surface artifacts; these specimens may indicate an occupation much earlier than that represented by the Choris material.

Forty-two unifacial endscrapers (Figure 4c), a relatively high proportion of the artifacts, were recovered from the site. Many are similar to those in Denbigh and other ASTt assemblages (Giddings and Anderson 1986). Eight flake knives were found, which are similar to those that occur from Denbigh through to Norton assemblages (Figure 4d-f). The Satkualuk collection includes six drills and graters of forms that have a broad distribution in both Denbigh and later assemblages. There are thirty-one bifaces, most of them fragmentary or of culturally undiagnostic forms (Figure 4b). Lanceolate bifaces of the type associated with Choris assemblages are represented by only two small medial fragments. The only complete biface is a small sideblade inset (Figure 4a); tips of small pointed endblades and unfinished symmetrical bifaces, which were probably intended as small endblades, were also found. Twelve coarse stone tools, manufactured from quartzite, were recovered from the site. The collection also includes two hammerstones, two abrasers, one polished pebble, a variety of retouched flakes, sev-

eral core and nodule fragments, and numerous unretouched flakes.

While the majority of the artifacts recovered from Satkualuk appear to be most consistent with a Choris affiliation, some specimens suggest a closer relationship to the Denbigh Flint Complex and even earlier cultural complexes.

**Faunal Remains**

Relatively few faunal remains were found. Seal and caribou bones were recovered from the buried deposits. A lack of organic artifacts, as well as the scarcity of faunal material in both the buried deposits and on the surface of the site, may be related to poor preservation. However, sampling may also be a factor, and future excavation in undisturbed areas of the site may produce more organic remains.

**Radiocarbon Dates**

Seven AMS radiocarbon dates are currently available for Satkualuk, and the range of dates supports the artifactual evidence in suggesting that more than one component is represented at the site (Table 1). Mason and Gerlach (1995) have attempted to rationalize the confusing series of ages which have been ascribed to the Choris culture. They conclude that the large number of Choris localities at Cape

Table 1: Uncalibrated Radiocarbon dates from the Satkualuk site.

<i>Location of Sample</i> <sup>1</sup>	<i>Material</i>	<i>Date</i> <sup>(14C yrs BP)</sup>	<i>Lab Number</i>
Deflated zone	caribou antler	1450± 60	Beta-65520
Deflated zone	caribou bone	1920± 70	Beta-65519
Deflated zone	charcoal	4710±100	Beta-77811
Buried deposit, depth 40-45 cm	seal bone	1720± 50	Beta-77810
Buried deposit, depth 55-60 cm	caribou (?) bone	2230± 60	Beta-77809
Buried deposit, depth 70-75 cm	charcoal	4480± 50	Beta-77808
Buried deposit, depth 55-60 cm	charcoal	6140± 70	Beta-80071

<sup>1</sup>Note that depth is measured below local surface and does not necessarily indicate stratigraphic position. The four samples from the buried deposits are listed in stratigraphic order from late to early.

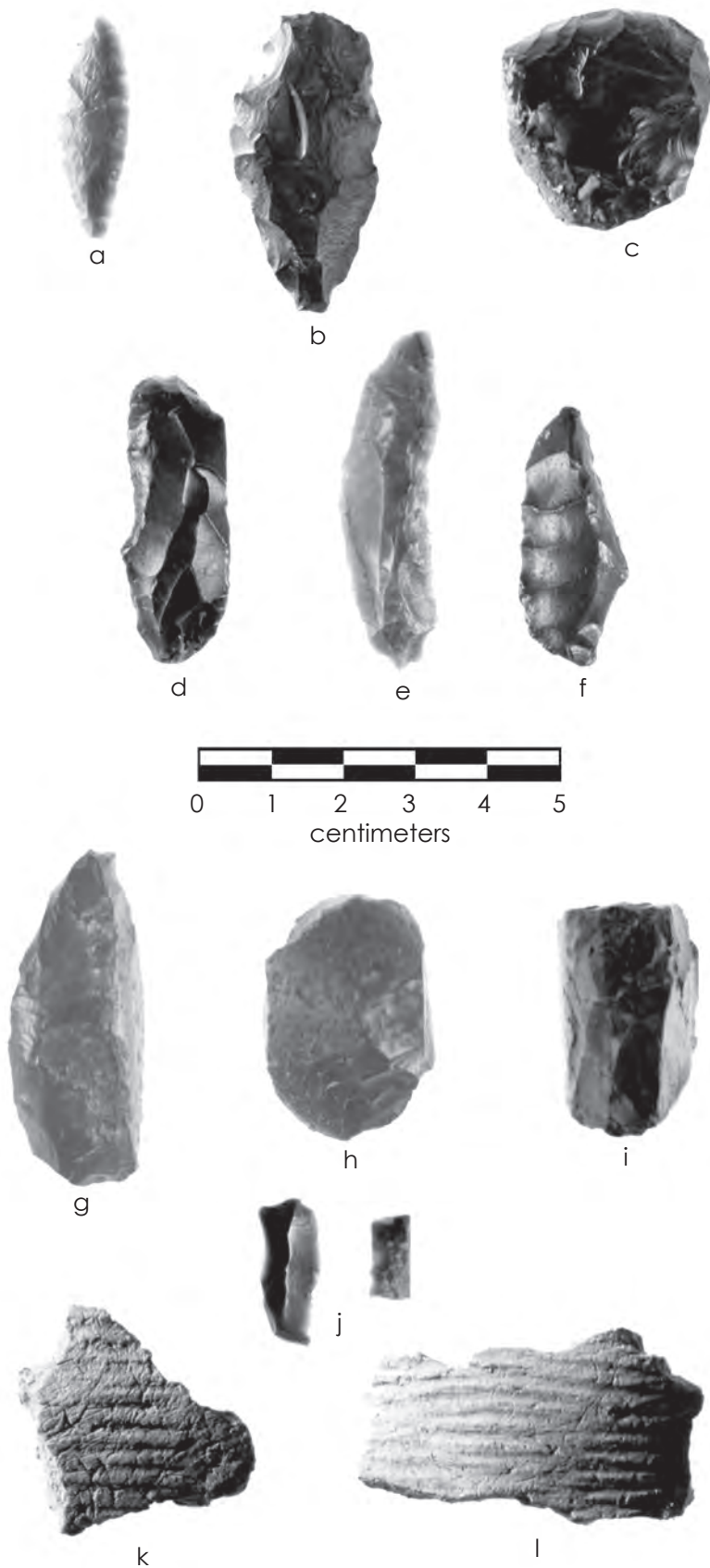


Figure 4: Artifacts from the Satkualuk site: a sideblade; b biface; c unifacial scraper; d-f flake knives; g burin; h burinated biface; i microblade core; j microblade fragments; k,l ceramic sherds.

Krusenstern date from later than 2500 radiocarbon years ago but earlier than 1600 years ago, and that most of the acceptable Choris dates from other localities in western Alaska range between approximately 2700 and 2200 years ago.

The radiocarbon dates from the lowest of the stratigraphic levels at Satkualuk (6140 and 4480 BP), as well as the date of 4710 BP from the deflated zone, suggest an occupation of the site significantly earlier than Choris times, and probably relating to ASTt or earlier cultural complexes. The date of 2230 BP from an intermediate occupation layer is within the Choris range, while the date of 1720 BP from the upper layer of the buried deposits and the date of 1920 BP from the deflated zone may relate to later Choris occupations. The final date of 1450 BP likely derives from a more recent use of the site.

### Assessing the Relationship of the Satkualuk Site

In order to evaluate the potential significance of the Satkualuk site, we must consider our understanding of the archaeological unit known as "Choris culture." With specific reference to the Palaeo-Eskimo occupations of High Arctic regions, I have proposed (Sutherland 1996) that early Arctic cultures should not be envisaged as representing widespread populations with identical technologies. Rather, on the model of the historic Inuit of the Central Arctic, they may be more usefully viewed as a mosaic of local groups adapted to local resources, each sharing some elements of culture with neighboring groups, and each developing along its own distinct trajectory over time. This concept would seem to be particularly apt as a means of conceptualizing the population associated with Choris culture, which Mason and Gerlach (1995) have portrayed as an archaeological "horizon," a widespread but thin veneer of occupation remains left by a small and highly mobile population. The discovery of an artifact assemblage characterized by attributes of Choris culture in the Mackenzie Delta, over 1000 kilometers to the east of similar sites on the coast of the Chukchi Sea, represents a significant geographical extension of this poorly understood cultural complex. It also suggests that the cultural implications of the "Choris horizon" may be more extensive than have been previously thought.

Prior to the discovery of the Satkualuk site, no clear evidence of human occupation earlier than that of the Inuvialuit during the past few centuries had been found in the Mackenzie Delta proper. However, ASTt sites have been located in adjacent areas, including the Yukon Coast, the Tuktoyaktuk Peninsula, the Anderson Plain, and Cape Bathurst Peninsula. In a re-examination of the large but mixed collection from Engigstciak in the northern Yukon,

Clark (1976) has suggested that "post-ASTt correlates with Choris/early Norton" exist in the form of discoid scrapers, Donnelly-like burins, a single Choris-like harpoon, and adzes, as well as antler wedges, lateral insets, small stemmed points, burinated flakes, a single drill, and a variety of pottery types including linear impressed. Greer (1991) has suggested that the bifacial adzes and some of the endblades from the Trout Lake locality are similar to those of Choris assemblages from Alaska. From sites in Hutchison Bay on the Tuktoyaktuk Peninsula, at Mallock Hill on the Cape Bathurst Peninsula (LeBlanc 1991a, 1994) and also at the Lapointe site at Bloody Falls on the Coppermine River (McGhee 1970), a few Choris-like parallel-flaked bifaces and biface fragments have been found (Figure 5).

Two other important sites that must be considered in this discussion are the Lagoon site on Banks Island (Arnold 1981) and the closely related Crane site on Cape Bathurst Peninsula (LeBlanc 1994). With the majority of radiocarbon assays from these sites clustering between 2300 and 2500 BP, these components date to approximately the Choris range. Their artifact assemblages show a confusing mix of technological traits which combine Alaskan elements with those resembling late Pre-Dorset culture in Arctic Canada. Although LeBlanc considers that needles from the Lagoon site and some side-notched endblades from the Crane site resemble Choris forms, and Dumond (2000:11) notes a similarity between the barbed harpoon heads from the Crane site and those from the Choris Peninsula, the entire assemblages show little coherent resemblance to Choris or any other defined Alaskan complex. However, it seems possible that the complex represented at the Lagoon and Crane sites may have derived from a Choris precursor. The Satkualuk assemblage shows no specific similarities to those of the Lagoon complex; rather, the co-occurrence of several elements of Choris technology indicates a closer relationship to the Alaskan Choris complex. The existence of such an assemblage located approximately halfway between the Lagoon complex sites on the Beaufort Sea coast and the known range of Alaskan Choris, strengthens the possibility of a Choris-like influence on the development of cultures in the western Canadian Arctic.

### Conclusions

Despite the preliminary nature of the investigations, there is sufficient diagnostic material in the collection from Satkualuk to support the view that at least one component at the site indicates a Choris presence in the Mackenzie Delta. It would appear that small and mobile groups who left the assemblages forming the Choris "horizon," in the terminology used by Mason and Gerlach (1995), wandered at



Figure 5: Locations of sites mentioned in the text.

least as far eastward as the Mackenzie River and established a coastal occupation similar to those known from north-western Alaska.

The site not only holds potential for increasing our knowledge of the Choris culture, but also for aiding our understanding of prehistoric relationships between Alaska and the Canadian Arctic. The presence of an eastern outlier of this early culture may be significant in assessing the development of the Palaeo-Eskimo tradition in Arctic Canada. In particular, it may increase our understanding of the development of the Dorset culture, a process which occurred between approximately 3000 and 2500 years ago in areas well to the east of the Mackenzie River. The possibility of Alaskan influence on this development has been argued in the past without the benefit of archaeological evidence (Taylor 1968).

The prehistory of Arctic Canada has been generally viewed in terms of two major migrations: the first by Palaeo-Eskimos between 5000 and 4000 years ago, and the second by Neo-Eskimos who moved eastward about 1000 years ago. The Satkualuk site suggests that the actual picture may have been considerably more complex, with multiple movements of peoples eastwards from Alaska to the western portions of the Canadian Arctic. Cultural developments in Arctic Canada, previously thought to have occurred in isolation from developments in Alaska, may in fact have been influenced by knowledge brought to the Canadian Arctic by such immigrants.

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