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Ipiutak Remains Mysterious: A Focal Place Still Out of Focus

Owen K. Mason[1]

INTRODUCTION

Sixty-five years following its discovery in 1939, Ipiutak, at Point Hope, Alaska (Fig. 1), remains one of the most intriguing places in the western arctic. Situated on a low gravel spit, 2 to 5 m above the Chukchi Sea, the Ipiutak site circumscribes an extensive settlement area across five beach ridges (E to A) that apparently was associated with > 150 graves up to several km away (Larsen and Rainey 1948). By 1941, archaeologists excavated 12% of its mapped habitations, cataloged and archived >10,000 artifacts. Much remains unknown or equivocal about the history and practices of Ipiutak's inhabitants: Was it a large town? When was itoccupied? What was its subsistence base? Why was it abandoned? Was it ruled by battle hardened chiefs and/or shamans? Who were their ancestors?[2]The imagination of the archaeologist, ideally, should aspire to the social and mythic landscapes that radiated beyond the circumscribed real estate of the archaeological site (Renfrew and Cherry 1986; Tilley 1994) – in practice, the Ipiutak data are insufficient for such flights of fancy.

The Ipiutak *ethnos* spanned hundreds of km, across the Brooks Range (Reanier 1992) and into northern Norton Sound, into Golovnin Bay (Mason 2000; Mason et al. n.d.). Coastal locales were very small settlements of 50 people, including several houses; each had a larger community

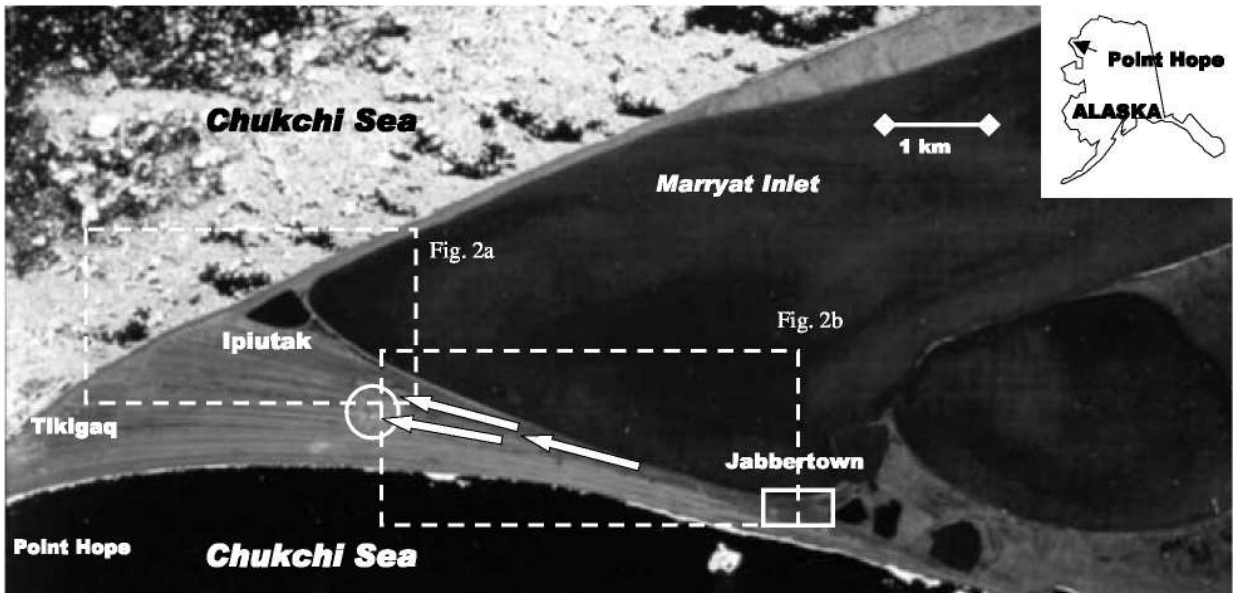

Fig. 1. Aerial Photograph of Tikigaq (Point Hope) spit, the location of the principal archaeological sites. The present village of Point Hope is indicated by the circle. The arrows indicate the splaying out of the spit in the last 1000 years, the age of the ridge underlying the Jabbertown site. The dashed squares mark the detailed maps in Figures 2a and 2b, which delineate cemetery clusters and the locations of ^{14}C ages, archaeological and geological.

1. Geoarch Alaska, P.O. Box 91554, Anchorage, AK 99509; geoarch@ptialaska.net

structure, as at Cape Krusenstern or Deering (Larsen and Rainey 1948; Anderson 1984:88-89; Anderson 1986; Reanier et al. 1998; Mason 1998; Larsen 2001). Interior sites were only single houses or encampments on lake margins (Clark 1977; Anderson 1984; Gerlach 1989; Reanier 1992) with a large ceremonial structure, serving as a regional gathering locale, as at Feniak Lake (Hall 1974). Caribou kill or processing sites are rare; two are well documented: Anaktuvuk Pass (Mills et al.

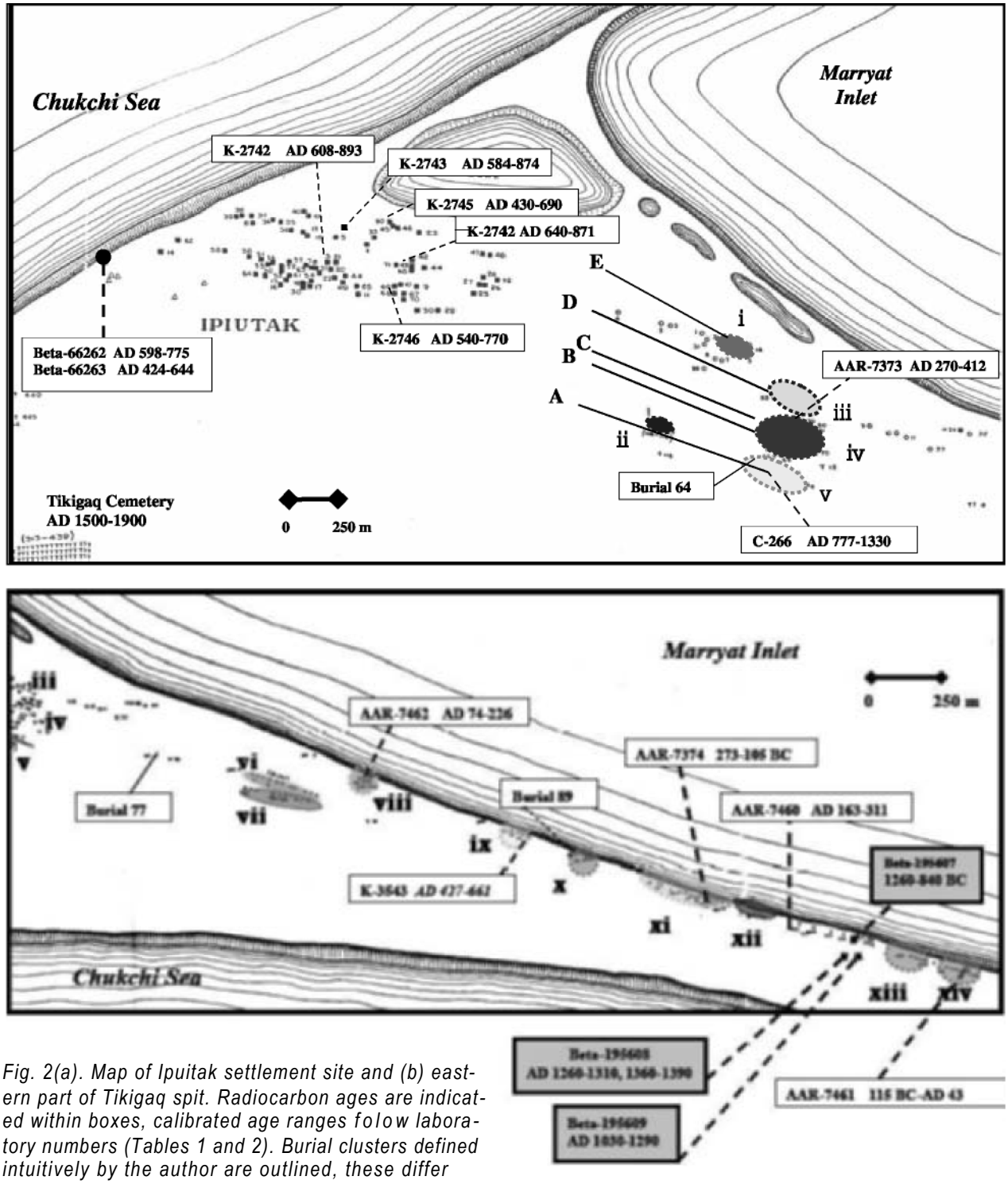

Fig. 2(a). Map of Ipuitak settlement site and (b) eastern part of Tikigaq spit. Radiocarbon ages are indicated within boxes, calibrated age ranges follow laboratory numbers (Tables 1 and 2). Burial clusters defined intuitively by the author are outlined, these differ slightly from Newton (2002:4). Burials with special significance are noted. Ridges are listed as Larsen and Rainey 1948 defined. In Fig. 2(b), the ages from the BIA (Table 2) are presented within bold brackets.

Beach Ridge x_{th} Landward	Houses Tested by Larsen & Rainey	Total Excavated	Dating: Context, ^{14}C yr BP (Lab. No.)	Calibrated Year (2s)
E=28th	23, 45-48, 50	6	**House 50,** antler wedge, 1490±70 BP (K-2745)	AD 430-690
D=27th	1, 5, 8, 12, 15, 19, 26-27, 32-44, 68, 71,	23	**House 32,** worked antler 1320 ±70 BP (K-2743) **House 43,** worked antler 1290 ±55 BP (K-2744)	AD 640-871 AD 584-874
C=26th	2-4, 6, 7, 9, 10, 20-22, 25, 49, 51-59, 61-63, 65-67, 69, 72	29	**House 3,** wood 1300±70 BP (K-2742) **House 69,** wood sled runner 1390 ±70 BP (K-2746)	AD 608-893 AD 540-770
B=25th	11, 13, 14, 16-18, 28-31, 49, 60, 64, 70,	13		
A=24th		0	Organic horizon 30 cm bs, wood 1370 ±50 BP (Beta-66262) 1520 ±50 BP (Beta-66263)	AD 598-775 AD 424-644

Table 1. Radiocarbon Ages from the Ipiutak settlement, compiled from Larsen and Rainey (1948: 188-241). Radiocarbon samples from Gal 1982 and Sutcliffe 1994, written communication. House 24, a Near Ipiutak house was outside the immediate Ipiutak site area, about 1.5 km east.

1999) and the 58 "Norton-Ipiutak" hearths and two house floors within Band 2 at Onion Portage (Anderson 1988:121-122).

TIKIGAQ SPIT

Tikigaq spit is, metaphorically, an index finger, a digit gesturing into the Chukchi Sea, issuing from Lisburne Peninsula, at the farthest northwest of Alaska (Fig. 1). The spit remained ice-locked until well into the summer, as late as early July (U. S. Coast Pilot 1938:443), a circumstance that benefits bearded seal and walrus and the humans that live by their flesh. The point "plunge[s] deep into the sea mammals path" (Lowenstein 1993:21; cf. Fay 1982). The spit was conceived as a whale-like being rising from the sea (Lowenstein 1992:xxviii, 8) – and the identity of 19th century Tikigaq residents with the whale was nearly metaphysical since many lived within shelters inlaid with whale manibles and were buried in precincts with towering mandibles. The shape of the Tikigaq spit bears close resemblance to a harpoon and a raven's bill (Lowenstein 1993:21). To its Inupiaq dwellers, Tikigaq is not "real" land, it is a being that changes and grows (Lowenstein 1993:23ff).

To the geomorphologist, Tikigaq is a complex twin spit that encloses several lagoons (the largest, the Marryat Inlet), at the mouth of a small river, the Kukpuk (Kindle 1909; Shepard and Wanless 1971; Mason 1990). To its east, the low but rugged cliffs of the Lisburne Peninsula anchor the spit to the mainland. The gravel barriers of the spit are attached to two blocks of permafrost-bound silt, in the north and in the south. The beach ridge sequence across Point Hope was first considered a proxy for short term eustatic (ice-volume driven) sea level fluctuations (Moore 1960), but it predominantly represents variability in storm energies and sediment supplied by east to west bluff erosion and/or onshore trans-port of shelf gravels (Moore 1966; Mason 1990; Mason and Jordan 1993, 2002).

PUBLICITY IS DESTINY

The scale of the Ipiutak site – hundreds of house depressions – dwarfed all previous conceptions of life in the arctic. Many first impressions, generated during the first publicity barrage *(Time* 1941; Rainey 1941, 1942), persist in the public mind, especially in the Point Hope community. By 1940, after 550 houses were mapped Rainey (1942:319) concluded several thousand people had occupied the settlement at one time. The rationale for reconstructing a single large village was two-fold: no overlapping houses were mapped and the depth of midden was considered "insignificant" (Rainey 1941:319). A rough calculation suggested that 4000 or 5000 people lived at Ipiutak – more than the towns of Fairbanks or Juneau in 1940! A poetic vista beckoned: a well-appointed "town" with broad "avenues ... the most highly developed arctic culture yet found" (Rainey 1942:319). National publicity followed the Ipiutak discovery, with a brief notice "of a lost arctic city" in *Time* magazine (1941), followed by a lengthy article in *The National Geographic Magazine* (Rainey

1942). In the latter treatment, modern whaling at Point Hope was an undercurrent, witness the monograph title: *Ipiutak and the Arctic Whale Hunting Culture* which can be read as Ipiutak *within* a whale hunting culture. "No definite conclusion" established whether a genetic link existed between Ipiutak and the Inupiaq residents at Point Hope (Rainey 1942:322) – as still debated by physical anthropologists (Utermohle 1988).

Extent of Testing and Sampling

The maps produced by Larsen and Rainey (1948: Figs. 2, 3) inaccurately demarcate Ipiutak houses within an outline that does not conform to the configuration of the spit. GIS-based cartography should be employed to rectify the Ipiutak map with available 1:1800 aerial photographs from 1982, and the 1940, 1967 and 1977 surveyor produced maps. New photo-interpretation and ground-truthing may produce evidence of additional houses; site visibility increased between 1940 and 1967 due to "drifting sand," so that the 1967 team documented 13 additional houses on the oldest E ridge (Hosley 1967:13).

The size of the Ipiutak occupation remains uncertain; subject to the original mapping and the extent of coastal erosion both prior to 1939, during the 1960s (Hosley 1967), continuing to the present (Dekin and Cassedy 1986; Mason 2004, field notes). The Danish-American team mapped 575 houses, discovered following >250 test pits, of unspecified size (Rainey 1941:361). By 1941, 72 houses were excavated (3 partially) and (at least) 138 Ipiutak graves were uncovered (Larsen and Rainey 1948:58). The sample (Table 1) of excavated Ipiutak houses, n=71 (12% of the total) of Larsen and Rainey (1948) parallels the number of houses on each ridge: 8.5% of the sample were on the oldest ridge E, 33% on ridge D, 41% on ridge C, and 18% on ridge B. None of the houses on the youngest ridge were excavated. The Ipiutak burials were discovered by intensive random test pits, conducted by financially motivated local diggers (Larsen and Rainey 1948:22). The clustering of burials reflects intuitively modified testing – no maps of areas tested are available (Larsen and Rainey 1948:58). Thirteen houses have been tested at Ipiutak since 1941; all are unreported or mapped. Three houses were excavated in 1966 by Edward Hosley (1967:15); one had a large archaeofauna ("largely of walrus and seal remains, a minor amount of caribou...") while the other two "proved more fruitful, yielding a variety of worked stone...a few pieces of birch bark and some decorated ivory pieces" (Hosley 1967:15). In 1975, Andrews et al. (1977:26ff) shovel tested (50 cm^2) ten houses to establish the reliability of aerial photography as a survey tool; the collection includes mostly lithic debitage. One house at the eroding margin of the youngest Ipiutak ridge, tested in 1997 by Anne Jensen (2004, pers. comm.), contained a roughly decorated ivory piece (not in the typical Ipiutak canon) and the more diagnostic stone tools.

How far do the boundaries of the Ipiutak site extend? According with spit formation direction (cf. Figure 1), no Ipiutak remains are on ridges to the south. Several surveys (Larsen and Rainey 1948; Hosley 1967; and Hall 1990) have emphasized different phenomena along >3 km of the eroding margin of Marryat Inlet, the oldest composite northern ridge of the spit. In 1940, Larsen and Rainey (1948:166) mapped thirty middens with artifactual debris, interpolated with burials, and did not observe discrete houses. By contrast, Hosley (1967:16) emphasized several walrus bone scatters as kill sites due to the presence of flake debitage consistent with carcass processing. An effort by Dekin and Cassedy (1986) recovered mostly lithics from a variety of shovel probes, as part of a synthesis of previous research. A 1989 lagoon margin survey by Hall (1990) involved >2400 shovel tests across several km for a road right of way. Hall's data (1990:19-21) were qualitative (presence, absence), with mostly negative results (Hall 1990:19-21). Gal (1991:9ff) recorded several Ipiutak or Near Ipiutak middens and/or artifact scatters on three or four ridges south of the lagoon, suggesting an earlier age. Hedman (2005) mapped several dozen surface features of indeterminate function and affiliation northwest of Jabbertown (Qimiarzuq) and obtained ^{14}C ages that places the 11th century AD shore line on the 4th ridge underlying Jabber-town (Table 2).

The Ipiutak ridges have witnessed considerable testing: several thousands of shovel probes from 1939-2004. Following the high success rate of the initial Danish effort, one might have anticipated further positive results; however, very few discoveries have occurred since 1941. By contrast, Andrews et al. (1977) established that surface vegetation still offers the best predictor of subsurface deposits.

Laboratory Number	^{14}C Yr BP	Calibrated Age BP	Calibrated Yr BC/AD	Provenience	Material	Source
AAR-7372	N.A.	1602±35	AD278-418	Burial74	Antler	Newton2002:99
AAR-7373	N.A.	1614±38	AD270-412	Burial74	Antler	Newton2002:99
AAR-7462	N.A.	1800±38	AD 74-226	Burial 134	Antler	Newton 2002:99
AAR-7374	N.A.	2139±42	273-105 BC	Burial 98	Antler	Newton 2002:99
AAR-7463	N.A.	2111±39	239-83BC	Burial98	Antler	Newton2002:99
AAR-7460	N.A.	1713v37	AD 163-311	Burial 102	Antler	Newton 2002:99
AAR-7375	N.A.	1929±34	47 BC-AD 89	Jabbertown Burial 7	Antler	Newton 2002:99
AAR-7461	N.A.	1987±39	115 BC-AD 43	Jabbertown Burial 7	Antler	Newton 2002:99
Beta-195608	700±40	625±65	AD 1260-1310, 1360-1390	Tuckfield Allotment Parcel D Test Pit5 53cm bs	Charred material	*This paper* Hedman, 2004
Beta-195609	820±70	790±1 30	AD 1030-1290	Tuckfield Allotment Parcel D Test Pit 9, 62cm bs	Wood	*This paper* Hedman, 2004
K-2741	1790±70	1603±70	AD 72-419	Midden 25	Worked antler	Larsen 1982
K-724	1970±100	1890±100	201 BC-AD 320	Near Ipiutak hearth	Charcoal	Tauber 1964:223
K-3533	2050±70	1469±70	AD 536-1017	Burial 87	Walrus Ivory mattock	Larsen 1982
K-725	2070±100	2065±100	363 BC-AD 132	Near Ipiutak hearth	Charcoal	Tauber 1964:223
Beta-195607	2870±70	3000±70	1260-840 BC	Tuckfield Allotment Parcel D, 57 cm bs	Wood	*This paper* Hedman, 2004

Table 2. Radiocarbon ages from Near Ipiutak and Ipiutak Burials and Middens east of Point Hope, from Newton (2002:99); presented as reported, N.A.= Not Available, without ^{14}Cyr BP. The Beta Analytic ages are from the Bureau of Indian Affairs archaeology investigations on the Tuckfield Native Allotment, Wiliam Hedman 2005. Copenhagen ages (K-) are from Larsen's efforts (Ralph and Ackerman 1961, Larsen 1982b).

SETTLEMENT DESIGN

The linear character of Ipiutak houses across the five oldest Pt. Hope beach ridges suggested a purposeful design to Rainey (1941, 1971). While linearity might have had a social significance, yet to be understood, the underlying topography derives from the storm surge deposition of higher ridge and slightly lower, wetter, swales during intervening periods (Mason 1990). Both the most landward ("E") and the most seaward ridges ("A"), the oldest and youngest to form, contain the fewest houses. Roughly 80 houses were mapped on the oldest, and 20 on the youngest ("A"). The houses on the youngest ridge are widely spaced; most are separated by 40-60 m over a lateral distance of 500 m. Could these represent a single occupation? If so, the social space represented could have held 135-150 people, close to the low estimate for Ipiutak population by Mason (1998:273-274). On the three densely packed ridges, houses were tightly packed on the nearly composite B and C ridge. The two largest structures (House 31 and 51), termed *qalegit* or community structures (Larsen and Rainey 1948:47), lie on ridge B – no other such structures are yet known. The packing of houses on the ridges suggests the development of a domestic cycle, with descendent house clusters describing 40 to 60 m wide circle or oval in subsequent generations. If a single generation minimally required 20 or 30 houses then about five generations (100 years) would be required to fill the surface of a single storm ridge. Although similar to Hosley's (1967:34) estimate that a new ridge formed every 70 years, the extant radiocarbon chronology suggests that Ipiutak favored ridges more landward than the most recent one and settled on surfaces already several hundred years old.

RADIOCARBON CHRONOLOGY OF THE IPIUTAK OCCUPATION AND CEMETERY

Only five of the nine conventional cultural and geological ^{14}C ages offer firm contexts to assess the chronology of the Ipiutak settlement (Gerlach and Mason 1992; Mason and Gerlach 1995) (Table 1, Figs. 2a, 2b). Two 1950's solid carbon ages are unreliable: Each sample derives from many objects,

14 arrowheads for P-98 and several wood artifacts for C-260 (Rainey and Ralph 1959:369-370). Five houses from three ridges (E, D and C) benefit from the 1977 effort by Larsen (1982b in Gerlach and Mason 1992). An antler wedge from House 50 on ridge E dates within AD 430-690 (at 1σ, AD 531 - 646), while wood on House 69, on ridge C, dated to AD 540-770 (at 1 σ AD 598-691). Two antler ages from Houses 32 and 43 place the ridge D occupation from the early 7th to the late 9th century AD (at 1 σ, House 43 dates to AD 669-776). The outliers are informative: the oldest House 50 may be as early as the 5th century AD, while the houses on ridge C were possibly built as late as AD 850-890. Two geological ages on drift-wood were obtained in 1994 by paleontologist Anthony Sutcliffe (1995:10; reported by Mason and Gerlach 1995:123); both were 30 cm bs on the eroding margin of the youngest Ipiutak ridge A. Considering whole tree effects, Sutcliffe's younger assay seems the most reliable, indicating the incorporation of the wood into the ridge was as late as AD 775. In sum, the few extant ^{14}C data suggest that Ipiutak was founded prior to AD 600, expanded vigorously between AD 650 and 870 and declined subsequently following an upper age limit in the 9th century. A problematic age from Burial 51 may date the collapse of the Ipiutak cult.

One western burial cluster (B 42-60 and B 110-117), close to the occupation and on a ridge younger than any of the houses, contained Burial 51, with its ivory eyes, AD 987-1277, within 1σ, (within 2 σ, AD 777-1330) – possibly during the latest phase, the *dénouement,* of the Ipiutak cult. Five Point Hope burials (B 74, 98, 102, 134 and JB 7) were dated by Newton (2002:99) using specimens from the Danish National Museum collection (Table 2). The objects dated were worked antler, but were not described or illustrated by Newton (2002); a single burial, B 74, was on the wider, western spit (on ridge C) and four graves were on the oldest composite ridge along Marryat Lagoon near Qimiarzuq (Jabbertown). The stratigraphic context of Newton's (2002:99) ^{14}C samples is uncertain; several had Near Ipiutak objects, originally considered younger and intrusive by Larsen and Rainey (1948:245, 246 for Burials 98 and 102). Newton's (2002) ^{14}C ages span >1000 years from 200 BC to AD 900; the earliest age ranges in the last centuries BC suggest that open work carvings typically considered Ipiutak were an early development during the Near Ipiutak phase, established as earlier than Ipiutak by Larsen (1968/69, 1982a). The long span of the ages indicates that the ridge represents a lengthy period, similar to the composite ridges at Cape Krusenstern and Espenberg (Mason 1990). Burial 74, emplaced AD 270-412, was on the western spit (on "C"), possibly predating the occupation on "older" ridge "D," the 28th landward, with its House 50 dated to AD 430-690. As the archaeological ages provide limiting ages on beach ridge formation, one can tentatively reconstruct the paleogeography of the Point Hope. If the age of Burial 74 is reliable, then the Ipiutak ridges should predate AD 200; therefore, archaeologists should consider whether Larsen and Rainey failed to dig deep enough – perhaps Near Ipiutak houses underlie Ipiutak!

ARRANGEMENT OF CEMETERIES

No Ipiutak graves were located on ridges south of the 20th from the southern margin – bearing in mind that shovel testing apparently was not conducted on these ridges. Ipiutak burials occur across the oldest ridges >4 km east of the "village" site (Larsen and Rainey 1948:Fig. 2) – at this scale the relationship between the settlement and the farthest graves remains questionable. Were people buried over 2 km distant really part of the Ipiutak community – or part of another settlement perhaps at Qimiarzuq? The number of burials recovered by Larsen and Rainey (1948) is uncertain: Over 106 grave features with human bone are Ipiutak, examining the appendix[3] but Larsen and Rainey (1948:58) listed the number as 138, while Newton (2002:15) claims records for 176, based on archival research in New York and Copenhagen. Many graves (n=39, 22.2%) lacked human bones; serving either as offering locales or cenotaphs; at least one (Burial 109) contained only a complete articulated dog skeleton (Larsen and Rainey 1948:248). Most burials were of individuals, but 15 were multiple interments, ranging from 6 to 15 individuals.

Discrete, linear arrays of graves suggest a close linkage temporally and an organizational imperative; by contrast, randomly distributed graves on adjacent ridges may be used to argue for contemporaneity between graves, although with less purposeful design. Graves > 50 m apart can be only generally associated with one another, rendering the designation of clusters at least partially an artifact of the scale of analysis. Many graves are mapped as aligned parallel with the linear trend of the under-lying beach ridge, but some grave concentrations cross cut ridges and suggest a random distribution. Several clusters of graves were in close proximity, representing purposeful interment, according to Larsen and Rainey (1948:59): Burials 42-60, 117-123 and JB 2-14). However, no enclosing structures definitively outline precincts and the delineation of

discrete cemeteries is not yet possible. If one uses an arbitrary 50 m cutoff, then 14 clusters are defined (Fig. 2a and b, marked as ***i*** to ***xiv***), exclusive of isolated graves of one or two. Newton (2002) employed a similar intuitive, non-mathematic approach but counted 15 clusters that were slightly different.[4] The term "cluster" implies a patterning to a series of graves that, in the case of the largest contain graves that occur sporadically over several hundred meters of the lagoon margin. Nonetheless, three clusters (#5, 7, 15; ***v, vi/vi, xi/xiv*** on Fig. 2a,b) account for over half (n=78) of the graves (Newton 2002:65) with another cluster (#4, **iv**, Fig. 2a) of 13 graves adds 10%.

Jabbertown *(Qimiarzuq)* burials (JB) 2-14 (Newton #15, ***xiv***, Fig. 2b), were termed an Ipiutak cemetery precinct by Larsen and Rainey (1948:251ff) and include 14 graves over a distance of 50 m, both in sterile gravel or within midden – "those in the sterile gravel were remarkably well-preserved, those in the...decaying turf were badly weathered" (Larsen and Rainey 1948:251). The "graves were in such close proximity that it was...difficult to distinguish the grave units, and [gave] the impression [of] a series of contemporary burials or one mass burial" (Larsen and Rainey 1948:59) – several defined by logs possibly were a former structure. JB 7 contained worked antler dated to 115 BC-AD 43 (Table 2, cf. Newton 2002:99).

Based on archival research, Newton (2002:76ff) analyzed artifact variability within 15 clusters in a qualitative (i.e., non-mathematical) manner.[5] Items of aesthetic or mystical use comprise over 30% in only two of Newton's clusters: #7 *(**vi*** and ***vi*** on Fig. 2a) and #15 *(**xi*** and ***xiv*** on Fig. 2b) with hunting or military equipment ranging from only 9% of Cluster 14 (between ***xi*** and ***xiv***) to nearly 70% of Cluster 10 (***x*** on Fig. 2b). Sea mammal hunting equipment was comparatively low, rarely >5% within any cluster but 53% in one cluster (#2). Tools were fairly infrequent; generally <15% of the total, only one cluster (#5) had 43% of its inventory in tools. Despite Newton's (2002:86) conclusion to the contrary, burial placement was likely related to categories of ascription and status that persisted over centuries – i.e., shamans in one area, warriors and hunters in others. Many of the potentially more numinous individuals were placed farther from the village. In addition, the chronology of the Ipiutak burials will require more data to be reliably and firmly established.

The cemetery clusters show an offset, if compared with the occupation site: a considerable number of graves are one or two ridges landward of the major Ipiutak ridges – this is especially true in relation to the youngest, most southern ridge. This geomorphic relationship is counter-intuitive: seemingly, the older more protected ridges should have been favored; this relationship also implies that all the ridges formed considerably prior to the settlement and cemeteries. Alternatively, the high representation of graves from the later periods might be indicative of a catastrophic end to the community.

DEMOGRAPHY

To estimate paleodemography, Mason (1998:273-274) employed the house area data of Larsen and Rainey (1948:187-224), assumed each square meter held 2.325 persons per m_2 (following Naroll 1962), ca. 8 people per house, and used the ^{14}C ages to define a 500 yr occupation, AD 400-900. Mason (1998:274) concluded that between 150 and 215 people lived at Ipiutak during any one generation between AD 400 and 900. The spatial distribution of houses suggests another approach to estimating Ipiutak paleodemography.[6] Across the five ridges, the number of houses approaches a normal distribution that suggests the expansion and decline of the Ipiutak culture. The oldest Ridge E had 75-100 houses, for a population totaling 800, at 115-200 per generation; Ridge D contained 200 houses, with an occupational capacity of 1600, ca. 320 per generation; the composite ridges C/B had 275 houses for a population of 2200, ca. 440 per generation. Finally, the most seaward youngest ridge A had only 20 houses, shelter for 160 people, possibly a single generation. Considering that the beach ridge construction likely preceded the Ipiutak settlement by >200 yrs, people might have moved to unoccupied, more seaward ridges, contemporaneously constructing additional houses that produces an illusory spike in house numbers. Hence, the demo-graphic reconstructions may be reduced by between 10 and 20%. Hence, from AD 600 to 800, each generational settlement represented about 350 to 400 people.

HOUSEHOLD ECONOMICS: GENDER, STATUS AND SPECIALIZATION

The household inventories listed in Larsen and Rainey (1948:187-224) represent an hitherto untapped data base to establish variability in gendered activities and craft specialization, evident in tabulations of selected (lithics excluded) artifacts (Table 3).

The number of artifacts recovered within houses was considerable; many houses had >100 diagnostic tools. The thickness of cultural deposit was also often substantial – 1 m in several cases (Houses 5, 7, 33, Larsen and Rainey 1948:191, 192, 203) and floors were often >1 m below surface; and in general preservation was exceptional – needles (or "needle bone") occur in more than half of the houses. However, the best preserved, House 65, did not yield substantially more objects (Larsen and Rainey 1948:221). Some artifacts were ubiquitous – typically high numbers of scrapers and cutting tools in nearly all houses, awls (in 58 houses), needles (in 30 houses), and pyrites for fire-starter [in 19 houses (Larsen and Rainey 1948:111)]. Awls were numerous (>10) in only six houses (H. 7, 9, 17, 32, 43, 66). Arrowheads, very likely related to warfare (Larsen and Rainey 1948:66), occurred in low numbers (<3) in many houses (33 of 69), but only seven had >10: partially excavated House 32 and H 43 on ridge D; Houses 6, 7, 9 and 55 on ridge C; and House 17 on ridge B. Only four houses had no arrowheads (Houses 5, 30, 49, 60). Ivory working debitage was higher within houses on the younger ridges, possibly later in the Ipuitak culture. Although nearly every house had some evidence of ivory working, generally <5 pieces and only four had none, only 10%, seven houses (House 19, 15 on "D," Houses 20, 22, 9, 2 on "C," and House 17 on "B"), contained higher amounts (>50 pieces of debitage) and only one (House 17) contained >150 pieces. Very few artifacts or manufacture debris was found in the (presumed) community spaces; apparently, both men and women worked at home – quite unlike the 19th century Yukon delta pattern of Yupik peoples (Nelson 1899:285). Because midden thickness does not correlate with artifact density, some households apparently specialized in craft production, especially in middle and later Ipiutak. The coincidences between the amount of hunting/military armament, sewing and ivory working indicate that some households were more productive in both male and female realms – certainly those with higher numbers of warriors or hunters required more clothing. Decorated or ceremonial objects do not co-occur with the level of craft production or armament; such objects are evident in nearly all (>80%) houses (Table 3).

A VORACIOUS APPETITE FOR WOOD AND WATER

One of the most baffling aspects of Ipiutak people was their apparent refusal to use oil for heat – in spite of interactions with OBS neighbors who did (Mason 1998). Wood demand at Ipiutak was "enormous" (Larsen and Rainey 1948:47; Larsen 1952:23). Each house required about two-dozen logs for construction, stockpiled from the fall storm zone. House building was, of course, a warm season activity – houses were built *before* the snow covered "spring" usage postulated by Larsen and Rainey (1948). Leaving a sturdy house in fall to head up country seems a poor strategy. Re-building a substantial house each year also seems a profligate strategy, at variance with human behavior – a standing cabin attracts re-use even by strangers; possibly, tragedy or death precluded reoccupation – although only a single (H 49) Ipiutak house had a burial (Larsen and Rainey 1948:21 2). Wood was used for heat, although wood "lamps" with blubber or oil possibly extended the wood supply, as at Kivalina in the 1950s (Saario and Kessel 1966:972). The need for fuel must have taxed the community or an abundance of driftwood ex-plains the attractiveness of the Ipiutak site. The procurement of sufficient water on the comparatively dry beach ridges presented another problem for summer residents. The water needs of hundreds or thousands of people, even at a liter per day, were prohibitive and provide another rationale for a snow season occupation.

SUBSISTENCE BASE

Larsen and Rainey (1948:68) sampled 14 houses for faunal remains, reported in one paragraph that concludes that ringed (53%) or bearded seals (12%) were the mainstay, with walrus (23%) for both food and cordage. Caribou bones were only a small proportion (10%). This attempt at faunal analysis involved the counting of the minimum number of elements (MNE), with no attention to individual animals (MNI). For the late 1940s, this probably was state of the art and the conclusion is uncannily prescient. Larsen and Rainey (1948:47ff) did not appreciate

House	Ridge	Area (m)	Arrow heads	Lance/ Daggers	Harpoon Heads	Awls/Needles Needle Bone	Worked Ivory	Art
H2	C	N.A.	3	1 D	2	7/-/-	at least 46	2 hooks, 1 pc. Mask-like set of carvings, 2 animal carvings, 3 openwork carvings, 1 chain link
H3	C	3.5 x 3	1	-	-	5/1/2	3	2 stones with glyphs, 1 ornament, 1 hook
H4	C	5.5 x 5.5	5	1 L or D	1	4/1/1	10	
H5	D	6 x 5	-	-	-	2/-/-	-	
H6	C	5 x 5	14	-	-	10/3/5	34	Labret, 2 brwbds, 2 ornamental bands
H7	C	5 x 5 1 m thick.	15	2 L	8	30/1/12	-	Browband, Animal Carving, Slat armor, Jet, Ochre, Pendants
H8	D	N.A.	3	1 L	-	6/2/3	23	
H9	C	4 x 4	12	2 L	7	16/3/9	50	Chain, antler tube
H10	C	5 x 5	5	1 L	3	10/2/3	-	Brwbd, 2 hooks, 1 ring, > fauna
H11	B	3 x 4	7	2 L	3	7/-/3	101	Snow goggles, animal carving, swivel
H12	D	4 by 4	9	-	2	2/-/1	28	Ivory peg
H13	B	4.75 x 4.75	1	1 L	1	5/1/-	37	2 Brwbd, Human head carving, pendants, 1 hook, 1 ring
H14	B	4 x 4	6	-	-	1/1/2	40	1 Brwbd
H15	D	5 x 5	3	1 L	1	10/1/2	80	1 hook, birch bark
H16	B	N.A.	6	-	-	4/-/-	22	
H17	B	4 x 4	13	4 L	4	16/3/6	152	3 brwbds., 2 pendants
H18	B	4 x 5	2	1	-	3/1/-	2	
H19	D	4.5 x 4.25	1	2 L	2	2/3/2	55	1 animal carving
H20	C	5 x 6	4	-	2	-/-/4	57	2 openwork carvings
H21	C	6 x 5	4	1 L	4	8/1/-	30	1 engraving tool
H22	C	6 x 5	2	-	-	4/3/4	48	
H23	E	4.25 x 4.25	2	-	-	-/-/-	4	
H25	C	4 x 4	2	-	2	1/-/-	3	
H26	D	4 x 4 30 cm thick	2	-	-	-/-/-	1	
H27	D	4.3 x 4.3 30 cm thick	6	-	1	2/-/-	4	
H28	B	4.6 x 4.6 50 cm	4	-	-	1/-/-	1	1 animal carving
H29	B	5 x 5.3 20-25 cm	3	-	-	3/-/-	5	
H30	B	3.6 x 3.6	-	-	1	-/-/-	4	
H31	B	6 x 7 40 cm thick	1	1 L	1	3/-/-	2	1 openwork carving, 1 animal carving
H32	D	Partial excav. 60 cm deep	12	2 L	5	23/-/1	12	2 brwbds, 1 human head, 1 pendant
H33	D	N.A.>1m thick	4	2 L	-	2/2/1	2	
H34	D	5 x 5	3	5 L	3	5/-/6	15	Engraving tool, 1 animal carving, winged object, 2 rings
H35	D	3.5 x 3	3	-	1	1/-/-	2	Swivel, 2 engraving tools
H36	D	4.7 x 4.7	2	-	1	2/-/-	5	1 engraving tool, 1 ochre
H37	D	4.5 x 4	7	1 L	1	3/1/3	5	2 brwbds, 3 gravers
H38	D	4.5 x 4.5	5	-	-	3/-/3	6	1 brwbd
H39	D	5.5 x 5.5	8	-	2	1/1/4	5	1 ornament
H40	D	4 x 4	2	-	-	2/-/-	11	1 engraving tool, ochre
H41	D	4 x 4.25	5	2 L	1	1/-/-	15	1 animal carving, 1 ring
H42	D	4.7 x 4	1	-	1	5/1/1	12	1 engraving tool, 1 mask pendant, 1 human head, 1 antler tube, 1 ornamental band
H43	D	4.8 x 4.4	16	2 L	1	13/8/2	13	1 engraving tool, 3 gravers, 3 brwbds,, 1 antler tube, 1 swivel
H44	D	4.5 x 4.3	6	-	-	4/1/1	2	1 engraving tool, 1 decor. Antler tube
H45	E	5.4 x 5.4	2	-	1	3/-/-	6	Ochre, 4 gravers, 2 jet, 1 mask pendant.
H46	E	4 x 4	3	-	1	2/12/4	6	7 gravers, 1 jet, 1 brwbd
H47	E	4.8 x 4.4	2	-	1	-/-/-	5	2 gravers
H48	E	4.6 x 4.4	2	-	-	-/-/-	2	Ochre, 2 gravers
H49	B	5 x 5 ; 30 cm thick hearth	-	-	1	4/-/2	10	2 birchbark, 1 human head, 1 animal carving, 1 swivel, 1 hook
H50	E	4 x 4	3	-	1	2/4/3	15	1 human head, 1 open work carving
H51	C	6.5 x 4.5 “probabl[e] community house” (p. 213)	1	-	2	1/-/1	19	1 engraving tool, 1 decorated antler tube, 1 ornamental band, 1 ornament, 2 mask pendants
H52	C	5.2 x 4.4	2	-	2	3/-/-	13	1 ornamental band, 1 mask pendant,
H53	C	4 x 3.2	3	-	3	3/-/3	9	1 jet, 1 engraving tool
H54	C	3.3 x 2.9	1	-	1	-/-/-	2	1 jet

H55	C	3 x 3; "one of the richest" (p. 215)	12	-	3	9/17/18	13	1 engraving tool, 4 gravers, 1 brwbd, 2 hooks, 1 ring
H56	C	4 x 3.4	8	1 L	1	7/1/-	11	1 brwbd, 1 ornament
H57	C	4.5 x 4.1	7	2 L	-	-/5/5	10	1 ornamental band
H58	C	5 x 5	3	-	-	-/-/-	-	1 animal carving, 1 mask set, 1 graver
H59	C	4.5 x 5	3	-	1	4/1/7	7	1 brwbd,, 1 open work carving
H60	B	4.7 x 4	-	-	1	-/2/1	10	3 ornamental bands
H61	C	4 x 4	1	-	1	4/-/5	3	1 graver
H62	C	4.4 x 3.5	3	-	5	7/-/11	7	1 engraving tool, 1 ornament
H63	C	4.3 x 3.9 Many bones 34 cm thick	4	-	2	8/6/1	5	2 engraving tool, 1 graver, 1 brwbd, 1 ornamental band, 1 mask pendant, 1 ivory peg
H64	B	3.6 x 3.2 Many bones	3	-	4	2/4/4	4	1 bone tube; "many bones of walrus, seal, whale, Polar bear, caribou…slab of whale bone behind fireplace" (p. 220-221)
H65	C	4 x 4 ; "best preserved" " 30 cm thick (p. 221)	5	-	1	4/-/4	7	1 engraving tool, 1 jet, birchbark, sewn
H66	B	3 x 3	4	2 L	1	10/-/3	2	2 gravers, 1 brwbd
H67	B	2.6 x 2.25	1	-	1	1/-/-	6	1 ornamental band
H68	D	4.5 x 4.1	4	1 L	1	4/-/2	-	2 gravers, 1 mask pendant
H69	C	4 x 3.75	4	1 L	1	7/-/-	1	3 gravers, 1 snow goggles
H70	B	4.5 x 3.75	4	1 L	1	6/-/-	3	1 graver
H71	D	4.4 x 4	9	2 L	1	7/-/-	1	1 engraving tool

Table 3. Artifacts indicative of gender and specialization within Ipiutak houses (n=69), excluding H1, H24 and H72. Houses 1 and 72 were incompletely tested, H24 considered Near Ipiutak. Lithics (end and side blades, scrapers, adzes, etc.) were excluded.

the significance of the fauna for their other scenarios of interior or seasonal occupations, also ignoring the ethnographic reconstruction of Rainey (1947). Despite these data, houses were described in relation to an antler-based technology as containing "a large number of caribou bones" (Larsen and Rainey 1948:66-67). Fishing was inferred from the presence of spears and leisters (Larsen and Rainey 1948:78). Dog bones, present in the houses sampled, were not considered dietary by the researchers – possibly an incorrect assumption (Mason 1998). The role of beluga hunting, minimally apparent in the fauna, raises an intriguing possibility in that inner Kotzebue Sound near Deering fostered beluga hunting (Lucier and VanStone 1995), as does Golovnin lagoon (Mason et al. n.d.).

VIEWS OF IPIUTAK: MAXIMALISTVS. MINIMALIST

Point Hope offers exceptional value as an intercept point for the north migrating walrus, one of only two places so commodious for its hunting: the other, the Yamal Peninsula (Rainey 1971:27), a perspective possibly contradicted by modern East Cape, Wales or St. Lawrence Islanders. Access to walrus was likely reliable at Point Hope (Fay 1982) – except in the anomalously warm years when the ice with-drew early, as in 2004. During very cold summers, the northern limit of the now distant seasonal ice pack might have rested against the shores of Point Hope – a circum-stance that meant walrus were close all summer. In other words, Point Hope might have resembled Pt. Barrow during the 19th century and early 20th centuries. The surfeit of walrus meant that a surplus of ivory could be accumulated, sufficient for trade with one's neighbors. This surplus was essential for the carving activity that is so characteristic of the Ipiutak cult (Table 3 and above).

The temporary placement of hundreds of structures along a bleak arctic shore was paralleled in Kotzebue Sound during the 19th century AD, with the annual trade fair at Sisualik (VanStone 1962; Rainey 1971:26-27). Along Hotham Inlet, in the summers of 1880 and 1881, hundreds of skin and pole structures *(tipis)* were arrayed parallel to the ocean as hundreds of Inupiat from across northwest Alaska gathered for social and economic commerce (Nelson 1899:231, 260-261). Does the *entrepôt* theory hold up? On numerous grounds, it does not. First, substantial houses were built, not temporary wooden tent structures. The faunal record indicates late winter, not summer *(contra* Larsen

1952:24). The substantial inventories within houses and the numerous burials reflect nearly year round sedentism, as argued by Mason (1998:273), not exclusive summer residence. In addition, water was likely insufficient for a large number of summer visitors, even for a few weeks.

The absence of polar bear is the definitive characteristic that led Larsen and Rainey (1948:47) to limit the use of Ipiutak to "spring" to "summer" use. Walrus arrived in the area during May during the 1940s but were the daily-sought prey from November to April (Rainey 1947:254). The summer subsistence round described by Rainey (1947:265-266) for the early 20th century emphasized fishing, beluga, bird and only *occasional* walrus hunting at either Capes Lisburne (70 km north) or Thompson (50 km south), but not at Point Hope. In any case, since polar bear skinning and processing often occurred on the ice (Rainey 1947:256), little evidence should be expected in the settlement. The substantial nature of the houses is dismissed because of a surfeit of wood or possible re-use; consequently, Larsen and Rainey (1948:47) ignore these data to argue for a forest origin for Ipiutak. Several issues cloud the hypothesis of temporary residence: Why were ceremonial houses constructed at a spring or summer site? Why was the carving of ivory occurring during the height of the fishing season? Why did so many people die or why were they transported post mortem to Point Hope? Why and how did people travel to the coast during April, a lean season, without using dog teams? Considering what is known about interior Ipiutak settlement in the Brooks Range, why would wood-burning people annually relocate to the treeless tundra, turning away from a bounty of driftwood on the coast? Few (if any) Ipiutak sites occur within the forests of western Alaska, most are in the Brooks Range or at treeline in the Kobuk River valley (i.e., Onion Portage is not completely a forest site, it is near treeline (cf. Anderson 1988:13, Fig. 4)). Is the Hahanudan Lake settlement in the upper Kobuk River drainage that has ceramics and no decorated pieces (Clark 1977; cf. Hall and Gal 1995:136) really attributable to Ipiutak?

At Ipiutak, the number and variety of the ivory objects carved for grave goods and the large inventories in houses belie the temporary residence postulated by Larsen and Rainey (1948:47). The mind labors to envision people hauling finished artifacts coastward from interior workshops or, in turn, carrying raw ivory landward to work at the interior sites – given the apparent absence of the dog sled. At best, the argument is one of negative evidence – no ivory workshops are reported in the interior and ivory working certainly occurred at Ipiutak, as evident from the debitage. The scale of the Ipiutak settlement, its art, its cemeteries, and the need to defend its stores, reeks of the sedentary, not of the forest (Mason 1998). Elaborated carvings and the profundity of the ideo-religious realms on them lead archaeologists to postulate shaman specialists, evident from the burials. Were there military specialists or war leaders? Considering that military hardware was undervalued by Larsen and Rainey (1948:66) – arrow points were considered evidence for caribou hunting (Larsen 1952:24), a reevaluation toward their use in war would mean that a substantial arsenal was present at Ipiutak. After all, some households were stockpiling over 10 arrowheads (Table 3) – the detachable lithic insets were even more abundant (cf. Larsen and Rainey 1948:187ff).

The contrasting minimalist view of Ipiutak, that of McGhee (1976), argues that only two or three families could have produced > 600 houses in a thou-sand years. Near miraculously, every house and burial would have to be preserved. The only way to falsify this view requires the precise radiocarbon dating of hundreds of houses. Nonetheless, could a single family or two sustain high artistic production over centuries, secure exotic iron, field significant numbers of defenders and maintain an elevated state of spiritualism? Why would house size vary so widely and why were community structures required for only one or two families?

Were Other Ipiutak Drawn to Point Hope?

Did Ipiutak operate as a regional center of a north-west Alaska polity that controlled a resource hot spot (Mason and Gerlach 1995)? How can interaction between sites of the patchy, largely montane distribution (Hall and Gal 1995) of Ipiutak sites be measured? Nearly all Ipiutak sites are south of Point Hope – none occur on the North Slope coastal plain, north of Cape Lisburne: Was Ipiutak a defending outlier of an alliance (Mason 1998) with the powerful Old Bering Sea peoples that dominated Bering Strait? Small communities – not quite villages – consisting of four or five houses occur at Cape Krusenstern (Giddings and Anderson 1986), Deering (Reanier et al. 1998), and with one or

two houses at Cape Espenberg (Harritt 1994).

Aesthetic products of considerable similarity across hundreds of km can be employed as evidence of interaction. Incised pebbles, with complex chevron and linear designs, occur at three widely separated sites: Point Hope (House 3, Larsen and Rainey 1948:190), Cape Krusenstern (predominantly in Houses 40-44, Giddings and Anderson 1986:121, 140-141) and Feniak Lake (Hall 1974:481). Two idiosyncratic, enigmatic "rakes" of uncertain function (either as hair ornaments or shamanic vessels) were also recovered at widely separated locales: An exquisite polar bear/human amalgam from Pt. Spencer (illustrated in Collins 1973:24; Larsen 1979/80) is comparable to an undecorated rake interred with a dismembered war-victim in Burial 89 at Ipiutak (Larsen and Rainey 1948:145, 242-243).

The affinities of Deering and Ipiutak are evident by comparing the three ostentatious burial offerings, loosely termed "masks," two are from burials associated with children (Burial 51 at Ipiutak; Burial 4 at Deering), the other (Burial 64 at Ipiutak) lies adjacent other two burials. The two sets of anthropomorphic human faces, each with holes for attachment onto wood or clothing and "danglers," are idiosyncratic in design and present a close ideological parallel of specialized objects either for mortuary purposes and/or public performances. Point Hope Ipiutak Burial 64 lacked human bones, but was only < 1.5 to 2 m from two sets of human remains (Larsen and Rainey 1948:238, Pl. 55). The Deering "mask," discovered in 1997 (Reanier et al. 1998; Steinacher 1998), is a set of seven flat ivory carvings arrayed into a human face, with two larval figures inset into a nasal piece and eight danglers (one of an OBS harpoon head) that were extracted from Burial 4, a child's interment within a stone slab box that contained seeds that dated between AD 660-783 [84.7% of the 2 σ range of 1280±40 BP (Beta-113142) Reanier et al. 1998:20)]. The Deering and Ipiutak "masks" employ similar motifs, using a solid line and an underscored fainter line, the circle and dot motif, often highlighted by a jet piece at its center. The Deering "mask" set bears several animal faces, four long-billed, bird-like heads issue at its corners with bear or seal like faces on the forehead and chin pieces, small curved larvae issue from the nostrils (Steinacher 1998). The Point Hope set also has two segmented inset pieces at its corners (in labret positions) that resemble caribou blowfly larvae; in addition, it bears abstract designs, most prominently the spoked circle on both cheek pieces (Larsen and Rainey 1948:138). The close similarities indicate that the two settlements operated within a single cultural milieu and artistic tradition, and had intimate – possibly frequent – contact: People from Deering probably journeyed to Point Hope. and/or vice-versa. The direction of influence was possibly bi-directional, considering that the Deering *qarigi* was substantially larger, with its anteroom 108 m^2 –twice as large as one at Ipiutak (Larsen 2001:23). Did people also travel between Pt. Spencer near Bering Strait to Ipiutak and also from the Brook Range to the coast? Mason (1998:298-299) suggested that trade in furs and stone from the interior was essential for Ipiutak's economy.

Point Hope remains the community with the greatest number of houses and burials; Deering offers evidence of a few elaborate burials, a purported *qarigi* (Larsen 2001), but so far only a single Ipiutak house, with a handful of artifacts (Bowers et al. 1999). Focal or "central places" with *qarigi* include: Point Hope, Feniak Lake, Desperation Lake, Deering, Cape Krusenstern and Qitchauvik; each community lies >500 km apart, possibly part of a system (Mason n.d.). Seemingly, political and military power followed the ability to access critical resources (especially walrus and/or whale) of the Chukchi Sea in the first millennium AD (Mason and Gerlach 1995; Mason 1998, 2000).

Stylistic similarities suggest a close relationship between Ipiutak and the Old Bering Sea peoples that dominated Bering Strait (*sensu* Arutiunov and Bronshtein 1985), as noticed by Larsen and Rainey (1948:143). In addition, the arrow points employed in warfare are identical, which implies a common military tradition (Mason 1998). Quite significantly, however, Ipiutak lacks the human figures of Old Bering Sea art (Bronshtein 1993; Leskov and Müller-Beck 1993) – instead concentrating on animals in trans-formation – the latter of course also a focus of OBS artisans and shamans.

Conclusions and Future Research Goals

We know far less about the Ipiutak settlement than we should – after 65 years! Researchers have several alternatives to probe the darkness and expand knowledge: Closely analyzing the monograph, examining museum collections and renewing field efforts. The latter two avenues offer analytical limitations and complex political hurtles and negotiations. Site structure questions will re-quire fieldwork: Despite recent progress, many aspects of

Ipiutak site structure and daily life remain open questions: some are basic: Community defense, extramural space and diet. However, the Danish-American excavation strategy focused on houses, not on extramural spaces, so useful for tethering dogs, processing skins, outdoor hearths, and other activity areas. Cache pits, sacrifice precincts, boundary markers, or barricades are also unreported. Excavation offers the only, possibly unattainable, means to document these features.

Due to its 1970's relocation, the present village rests atop several cemetery precincts (***i*** to ***v***, on Fig. 2a), so that research for many mortuary-related topics must rely on museum collections, as will most questions of chronology. Ipiutak and its cemeteries remain only partially dated: Of 84 houses tested, only five have ^{14}Cassays (6%) and only six graves are dated (4%). Consequently, we cannot convincingly describe the evolution or development of the Ipiutak cult, establish its contemporaneity with other cultures or reconstruct its past demography. No one has yet constructed a chronological succession of artifact types and attempted to either quantify or explain differences in Ipiutak domestic inventory, beyond the brief foray above. More quantitative studies are required to confirm that specialization exists or varied within the settlement through time. Museum collections will answer some of these questions, if numerous houses are dated with several AMS assays. However, new excavations are necessary to understand the subsistence base of the Ipiutak site – most collections lack fauna. Because most animal bones were recovered within houses, possibly as secondary (post-occupational) refuse, obtaining faunal materials will assist in defining occupation history. Further excavations will be required to confirm that taphonomy predetermined the artifact distributions within graves (Newton 2002:29-31). Several activities may not be profitably examined any further, as Newton (2002:11-12) discovered, the 1939-41 records and cartography are too imprecise for formal spatial analyses.

In view of the small and scattered universe of Ipiutak sites, perhaps fewer than 20-25, across northern Alaska, can we establish that *the* Ipiutak site represents a central place, a focal point for the entire region or culture? Ipiutak remains the only site with more than a handful of houses or graves – by an order of magnitude. Until rigorous mathematical techniques are employed (cf. Haggett and Chorley 1969), we cannot conclusively demonstrate such a relationship. Nonetheless, the pan-regional similarities in ideology, e.g. the shamanic cult revealed at Deering, Pt. Spencer and Point Hope (Larsen and Rainey 1948; Larsen 1979/80; Mason 1998), imply that Ipiutak people held beliefs in common and likely interacted on a regular basis, probably visiting Pt. Hope for trade or religious purposes. If we truly understood Ipiutak iconography, perhaps we could expand the mythic landscape of Ipiutak across northwest Alaska.

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NOTES

2. The present discussion excludes the physical anthropological datasets, i.e., the several analyses of the Ipiutak skeletons (Debets 1959, Giardini and Eggers 1999; Charles Hilton, 2004, pers. communication, ongoing). The focus is on only the Ipiutak culture, with minimal attention to its predecessor Near Ipiutak, excluding the younger phenomena, e.g. Birnirk and Thule at Qimiarzuq ("Jabbertown") and Tikigaq (cf. Larsen and Rainey 1948).

3. Based my collation of the Larsen and Rainey (1948) appendix, a total of 106 grave features contained 141 individuals considered Ipiutak, this excludes cenotaphs, dog burials and those listed as Near Ipiutak, "Tigara" (=Tikigaq) or unknown.

4. My intuitive approach, delineated on Figs. 2a and b, differs from Newton (2002:Fig. 1.1) by dividing cluster 7 into *vi* and *vi* (based on their differing ridge orientations) and in dividing 15 into two clusters, *xi* and *xiv*, because of an isolated grave in midsection, and terming 13 and 14 as isolates and not as clusters at all. As can be seen the intuitive separation that I favor indicates that five clusters (instead of three) contain most of the burials.

5. Newton (2002) includes a useful appendix on disk which links artifacts, catalog number, grave by grave – if available in Microsoft *excel* this could expedite future analyses.

6. Ipiutak house area varied (cf. Table 3), from very small – 6 m^2 (House 67) to 30 m^2 (Houses 4, 20, 21, 22) – excluding the largest (House 31, 51), that were very likely used as community spaces. A calculation using Table 3 indicates that mean house size (excluding the largest two) remained similar in the early and middle periods (Ridge **E**, M=20.1 m^2, Ridge **D**, M=20 m^2, Ridge **C**, M=19.4 m^2) but was lower (15% by area) on the younger ridge **B** (M=16.8 m^2). The significance of this decrease is uncertain: The range of sizes may relate to household composition or status; low sample size (n=14 on ridge **B**) may be a consideration (the three smallest are on this ridge). The mean house size, including the typical 1 m^2 central hearth, contained space sufficient for 8.6 people. A house of 6 m^2 had space for 2 people; one of 30 m^2 had space for twelve.