

large game animals. Certainly the environmental differences found to the immediate north and south of the Brooks Range are considerably less than those much farther south where Clovis sites are known, sites in low, hot desert, high plains, prairie, and Gulf coastal plains. The present interpretation of Brooks Range prehistory for the time periods later than Clovis occupation provide no evidence for numerous distinct groups occupying small regions, indeed only during the period just preceding historic contact when Nunamiut and Kutchin co-existed on the north slope do we have more than single definable occupations. Farther to the south Clovis is usually given a unique position or occupation of their terrain. In order to postulate a simultaneous occupation by distinct groups or a rapidly changing sequence of technologies I feel we should be able to demonstrate major differences in cultural remains, and, ideally, the stratigraphic proof.

The archeological finds at Putu give evidence for a culture with a larger variety of tool types than has previously been shown for the north. The projectile points, and/or knives, includes fluted, lanceolate, triangular Chindadn, and a suggestion of bone points with inset micro-blades; shaping tools include a variety of burins, graters, utilized flakes, and split-knife pseudo-burins. Cores for the material at hand include rotated polyhedral cores, a boat-shaped core and the suggestion of wedge cores. A series of dates from sites with most if not all of this technology suggests an occupation of Alaska's north before 11,400 years ago. The spread of this culture, its knowledge of local terrain and widespread utilization of a raw material source such as the Batza Tena obsidian quarry should indicate that the initial occupation preceded that date by more than a few hundred years.

THE PUTU COMPLEX

Arctic archaeology for many years has resembled a game of follow the leader, in this respect, that once the initial discovery of a totally new period, or culture, or phase has been made, this has been followed almost immediately by numerous similar discoveries by other field workers in other areas. Examples are not hard to find. First in mind are the rather exceptional finds of ASTT (Arctic Small Tool Tradition) by J.L. Giddings. By the time the Denbigh site report was published there were literally scores of ASTT sites known from one end of the American

Arctic to the other. A similar pattern may be seen with the discovery of Side notched points, first again by Giddings, followed by Campbell and then by practically every field worker in the north. The third example, one I want to enlarge upon, has been discovery of fluted point sites in northern Alaska. While the gap in time between Soleki's initial discovery and its follow-up by Humphrey, the decade since Humphrey's Utukok work has seen the discovery of numerous sites containing fluted points. If these sites are not now commonplace, they certainly can no

longer be characterized as rare.

While we can say that the data base for this early period has gone well beyond Solecki's description of an isolated point, the synthesis of these data has not gone much beyond his initial statement. The reasons for this, as I will try to show are that these early sites suffer from one or more defects. Most of the sites have been found either resting directly on glacial gravels or are no deeper than the matted tundra root system. As such few can be characterized as buried deposits and most are located in favored hunting lookout stations that have been used and reused for thousands of years. Our cautious clan has characterized these sites as at least potentially mixed deposits. To further compound the problem the data have been interpreted on the basis of what is understood for sites several thousand kilometers to the south. The Putu site does not, however, seem to suffer from the above defects and the finds made at that site suggest that a slightly different approach to interpretation should be considered.

Three distinct horizontal strata were located at the Putu site. The uppermost is a dark root-matted soil only a few inches thick. Below this is a light tan loess zone from one and a half to two feet thick. Artifacts belonging to the early occupation were clustered in the bottom-most two to three inches of this zone. The basal, sterile zone below is composed of a gray decomposing shale.

It is necessary at this point to provide more detail on the site location as it bears on the probable use of the site. Approximately 30 meters below the crest of the hill are two small benches, ca. 20 x 15 meters, with only a meter difference

in elevation. The Putu site is on the lower of these. Testing of the higher bench uncovered no sign of human use. The site location cannot be explained as a hunting lookout, if for no other reason than there is no view. Where the top of the hill has an unrestricted view of the valley, from the Putu site less than one-quarter of the valley can be seen by a standing hunter. When sitting the view is restricted to the other side of the valley two kilometers distant. The artifacts recovered are neither indicative nor definitive on the site usage. A single broken scraper is balanced by a single hammerstone. The most common forms are broken blades. The predominant tool function appears to have been the shaping of antler as witnessed by the number of gravers, burins and pseudo-burins formed by splitting bifaces. Analysis of the reconstructed pieces indicates that very few of the stone tools were actually produced at the site. Items that might suggest hunting implements (which would be consistent with either a habitation or hunting site) include three fluted point fragments, one lanceolate point with three basal fragments of the same type, and a small triangular point. Except for the latter all show signs of considerable wear, suggesting at least partial employment as knives.

Before commenting on the association of the three point types found at Putu I would like to first present data on dating the site. Contrary to Bryan's recently published statement (Bryan, 1978) which claims the dates are confusing, I feel the dates are quite straightforward and internally consistent. They are: from a charcoal hearth at the bottom of the tan zone a date of $11,470 \pm 500$; soil from the lower half of this zone $8,454 \pm 130$; soil

from the upper half of the zone 6,090+430; a combined charcoal sample of small flecks discovered throughout the zone 5,700+190; and from charcoal in the upper root zone associated with a few flakes and pieces of saw cut antler 650+100.

A recent series of dates have been published by Hamilton and Porter (1975) for glacial events in that part of the Sagavanirktok contained within the mountains. The oldest date of 12,780+440 postdating the Itkillit readvance is found some 25 kilometers north of the Putu site. A slightly more recent date of 12,170+270 places an end moraine some 17 kilometers north of the site. The Itkillik II stage has been dated from two areas ca. 20 kilometers south of the site at 11,760+200 and 11,890+200. These dates suggest that Putu was occupied no more than 400 to 500 years after that part of the valley became clear of glacial ice.

In northern Alaska fluted points are found associated with lanceolate points as often as they are found alone. While Humphrey separated his Utukok finds into two early components, Driftwood Creek with fluted points and Kiktoyak with lanceolate points, one of the three Driftwood Creek sites has lanceolate points and one of the two Kiktoyak sites has fluted points. This same pattern appears with Donald Clark's Batza Tena localities. There Clark has defined a fluted point complex and a lanceolate point complex, even though few of the localities contained only one type. He did however recognize the problem and stated "if RKlg-30 constitutes a single component we are confronted with a case in which fluted points are associated with leaf-shaped and probably lanceolate points" (Clark, 1975). It should be mentioned that the obsidian fluted point from Putu was made

of Batza Tena obsidian. At Healy Lake the lowest levels contain all three point types as found at Putu.

The similarities of these various sites does not rest on projectile points only. The Utukok sites share also blades, polyhedral cores, end scrapers, large biface knives including ones split to produce graters, multi-spurred graters, boat-shaped tools and a high proportion of utilized flakes. Humphrey has pointed out the similarities of his Kiktoyak complex with both Healy Lake and the Akmak complex at Onion portage. The lack of projectile points at Akmak prevents the usual method for site comparison, however, the assemblages have other distinct types that do allow comparison. Indeed most of the formal tool types at Akmak have counterparts at Putu. One type found only with Akmak, the ovoid core bifaces might be the result of different available raw materials. Another type, the campus microcore, while poorly represented at Putu, was almost certainly used to produce the narrow, multifaceted microblades that are present. Other tool types found at both Akmak and Putu include burins, large bifaces, end scrapers and utilized flakes. The burins, blades and large bifaces are also common at Healy Lake where all three of the point types known at Putu have been found in the lowest levels.

It would appear then that a series of early sites in northern Alaska, including the lowest level at Healy Lake, Akmak at Onion portage, the Driftwood Creek and Kiktoyak complexes of the Utukok region, the comparable complexes at the Batza Tena localities and the Putu site all share, albeit with rare absences and certainly different proportions, a common base of

tool types. They include fluted points with triple fluting, lanceolate points, the chindadn type triangular point, burins, gravers, split biface gravers, large bifaces, campus type cores, blades and microblades, end scrapers on blades, and utilized flakes. At least three of the sites have dates that indicate little time spread, Putu at 11,470 Healy Lake at 11,040, and Akmak at older than 8,500. If on the basis of artifact similarity we assume similar antiquity for the Utukok and Batza Tena sites and the assignment of different complex status by the various authors is correct we are faced with the rather peculiar proposition that ca. 11,000 years ago northern Alaska was populated by inhabitants producing at least seven distinct tool kits. If that is the case it is the only time that we might suggest such a heterogeneous population. For the remainder of north Alaska's prehistory we find a progression of populations, more often replacement of populations, but only in one case a sharing of the ecological zone by two groups. And that is the historically known brief period when the Nunamiut shared part of the Brooks Range with Kutchin groups. I believe that a much more satisfactory explanation is that during the period ca. 11,000

years ago give or take a thousand years, we were dealing with a single population, whose artifactual remains I would term the Putu Complex. Whatever variation that is seen should be expected mainly on the basis of site utilization differences. Clearly we should not expect the same tool kit to be found at a quarry as we would find at a temporary habitation locality and neither would give identity in all respects with a hunting lookout.

The Putu Complex presents a wider variety of tool types than what is expected from sites known in the southern regions. While I believe that it is too soon to provide definitive statements, as more clearly dated sites are required, our speculations now have to include whether the differences between fluted point complexes north and south are due to the attrition of certain types as people moved south, or whether these types were only added later as ideas moved from south to north. My own bias says that this variety of types has its closest similarities with the upper paleolithic of Russia, specifically some of the Koystenyki finds, and on the basis of burin, blade, and biface technology, no similarities with Asian-American predecessors.