Archaeological Investigation in Central Alaska

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The area referred to in the following summary of investigations includes the valley of the Tanana River, sections of the Central Yukon Valley above the mouth of the Tanana, and the upper Copper River Valley. This sub-arctic region, inhabited by bands of semi-nomadic Athapascan Indians, by white traders, trappers, miners, and only recently by a few farmers, presents unusual difficulties to an attempt to discover archaeological sites. This is due not only to the sparse population and limited cultivation but to the characteristic mantle of moss, brush and forest that obscures all evidence of ancient dwelling sites. No habitable caves or rock shelters have been found. Under these circumstances, investigations must depend primarily upon information obtained from the present natives and upon accidental discoveries made by white settlers in very limited cultivation and in placer mining operations.

Through inquiry at all the native settlements in the area we have succeeded in locating numerous old dwelling sites remembered or accidentally discovered by the natives. The majority of such sites may be classed as semi-permanent fishing camps marked by rectangular bark-house depressions and small refuse middens. They occur on small clear-water tributary streams rather than upon the banks of the great, swift, muddy, glacial rivers, a condition which can be explained by the fact that fish are the one dependable food supply of these people and that fish could be taken most easily in the small, clear streams before the introduction of the modern fish wheel made it possible to take large numbers of salmon in the main, turbid rivers. This circumstance undoubtedly affected the earliest inhabitants as well as the historic Athapascan Indians, since their food quest presumably presented the same problem, and it suggests that evidence of early migration must be sought not along the banks of the great rivers, but inland, on clear streams or lakes and upon high ridges which remain at present the routes of travel both for natives and for the game they follow.

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402 The investigations were carried out with funds supplied by the American Museum of Natural History in New York (Voss Fund) through an arrangement with the University of Alaska, College, Alaska, during 1936 and 1937. A more detailed account by the writer, entitled “Archaeology in Central Alaska” appears in the Anthropological Papers of the American Museum, Vol. XXXVI, 1939.
Numerous fishing-camp sites in the upper Tanana and Copper River valleys have been excavated, now making it possible to define in part the complex of traits characterizing an inland culture, not directly influenced by the Eskimo culture of the coast and the lower Yukon Valley. Most of the sites contain very few artifacts and cannot be associated specifically with historic Athapascons, but one site in the upper Tanana Valley, representing a long and more or less continuous occupation establishes a connection between historic and pre-historic Athapascan material culture. This site, known as Dixthada, is on Mansfield Creek near the present Mansfield Village. A series of ten refuse middens can be graded in age from those at the south end of the site, abandoned only twenty years ago, to those at the north end, abandoned long before any contact with European culture. Some slight changes in material culture are indicated, but the material as a whole can be referred to historic Athapascons and their ancestors. Briefly, the collections from this site include the following; hammered native copper arrow and spear points, awls or needles, skin scrapers, ear and nose ornaments; crude stone skin scrapers,\(^{403}\) whetstones, rubbed stone adzes, very small stone arrow points (stemmed), blades with bilateral retouching, scrapers with unilateral retouching, end-scrapers, retouched flakes, polyhedral cores and small prismatic flakes struck from these cores; bone and horn stemmed arrow points, barbed or notched bone points probably used on multipronged fish spears, bone knives, scrapers, awls, and a few unidentified fragments rarely engraved with simple patterns. Cut birch-bark fragments and numerous burned stones indicate cooking was done in birch-bark baskets. No pottery was found at this site nor at any of the numerous sites investigated in the Upper Tanana and Copper River Valleys.

Pottery was excavated, however, in small hearths and refuse pits at the site below Rampart Rapids on the Yukon River, thirty-five miles above the mouth of the Tanana.\(^{404}\) A few sherds have also been found

\(^{403}\) These scrapers, called *tei-tho* in the upper Copper River Valley, are made and used in preference to iron blades at present, both in that region and in the Upper Tanana, for scraping skins. It is the most common implement in all Athapascan sites excavated. An oval or semi-lunar flake is struck from a water worn boulder and then battered against a stone until crudely retouched. The same implement is reported by Hrdlička from the lower Yukon; also by de Laguna from the lower Yukon and Cook Inlet. The implement also occurs in collections from the Baikal region in Siberia.

\(^{404}\) Potsherds found at the mouth of the Tanana are reported by Frederica de Laguna “An Archaeological Reconnaissance of the middle and lower Yukon Valley, Alaska.” *American Antiquity*, Vol. II, pp. 6–12.
at the Agricultural Experiment Station near Rampart, forty miles above this point. A single sherd was also found in a field near Fairbanks in the Tanana Valley, two hundred and fifty miles by this river above its junction with the Yukon. Natives on the lower Tanana and central Yukon inform me that their ancestors made pottery near Rampart Rapids where they had found a deposit of suitable clay. Chief Matthew took me to a number of pits excavated to this clay stratum through three to four feet of surface soil. These pits are on the banks of the Yukon across the river from the hearths containing potsherds. I was further informed by the natives that pottery, made on the Yukon, was traded some four hundred and fifty miles up the Tanana as far as the mouth of the Delta River. At present, it appears that pottery was made by the historic Athapascan culture, since we have defined it in part through the excavation of old Athapascan dwelling sites. However, there is a class of flaked stone implements, associated with at least three accidentally discovered sites, which at present appears to represent a different type of stone industry. This class of material was first discovered in a site on the University of Alaska campus in 1933. It was excavated by Mr. John Dorsh, later by the writer. The first collection excavated was described briefly by Dr. N. C. Nelson405 who observed that certain implements classed as end scrapers, semi-polyhedral cores and small prismatic flakes struck from these cores are characteristic of pre-neolithic collections from the Gobi in Mongolia. He further observed that a definite similarity in the preparation process suggests specific proof of cultural relations between Asia and America. In a recent examination of epi-paleolithic and neolithic material from the Lake Baikal region in Siberia, now in the museums of Moscow and Leningrad, I recognized not only the specific scrapers, cores and flakes, but also practically all the characteristic implements from the University of Alaska site. The Alaska

Fig. 15.— Implements excavated at the University of Alaska Campus Site, Tanana Valley. 1. Semi-polyhedral core; 2-6. Prismatic flakes struck from prepared cores; 7. Flint blade; 8. Obsidian blade; 9. End-scraper; 10, Side-scraper, retouched from one face only; 11. Turtle-backed blade, retouched from one face only. (Natural size.)
material does not correlate with any one of the particular epi-paleolithic and neolithic cultures isolated in the Baikal regions, and conclusive comparison between Alaskan and Asiatic material can not be made, since the Alaska collections do not compare in size and since the vast intervening region of northeastern Siberia is practically unknown archaeologically. The striking similarities in certain types of implements undoubtedly indicate some cultural connection, but whether the material is contemporaneous and whether it is evidence of migration can only be determined by further work in the intervening inland regions both in Siberia and in Alaska.

The campus site and the two sites which appear to be related to it produced only flaked stone implements without any other cultural refuse and their age can be determined only through correlation with other sites. It may be that further investigation will make it possible to associate these sites with the historic Athapascan people, since the small end scrapers now are known to be one of the most typical implements in the Athapascan site (Dixthada) of the upper Tanana. The more significant cores and flakes have also been found in the Dixthada site, but in very small numbers, while they are the most common types of implement in the University campus site. Other implements from the campus site such as finely chipped blades and certain side scrapers do not occur in Athapascan sites. With the absence of bone, horn and copper implements as well as rubbed or polished stone tools, and with a small flint industry representing a different chipping process, these sites have been considered more ancient than Athapascan culture as now known, and suggestive of an early cultural relation between Asia and America.

Artifacts in association with late Pleistocene mammal remains, unearthed by placer mining operations in central Alaska were reported as early as 1933 but the scarcity of recognizable artifacts found and the circumstances of their discovery caused little significance to be attached to the finds. During the past three years, however, through the increase in mining activity and more careful observation, numerous implements have been found in late Pleistocene fossil-bearing deposits, indicating that men were contemporary with extinct mammals in the Tanana Valley.

407 Similar material is found under the same circumstances in the Gobi and in the Lake Baikal region.
Wide cuts, often several miles in length and sometimes as much as 140 feet in depth are now being sluiced out along stream valleys tributary to the Tanana in the Fairbanks District. In order to reach gold-bearing gravel beds an over-burden of frozen silt or "muck" is removed with hydraulic giants. This "muck" contains enormous numbers of frozen bones of extinct mammals such as the mammoth, mastodon, super-bison and horse, as well as brush, stumps, moss and fresh-water mol-lusks. With the possible exception of two species, the identified plant remains belong to living genera, but because of the extinct mammal bones, the "muck" is generally believed to be late Pleistocene or early post-glacial. No adequate explanation of the age of these deposits nor the manner in which they were formed can be given at present. Tree-ring studies recently carried out by J. L. Giddings, Jr. for the Frick laboratories in the American Museum suggest that the process of deposition as well as the actual age of the muck may be determined by this method. Utilizing stumps found at different levels in the muck, he has determined that some 15 to 20 feet of muck were deposited in Engineer Creek during a period of 307 years. A terminal date for this formation may be established eventually through comparison with timber in peat bogs and slow-growing trees at the timber line.

During the past five years 1933–1938, nineteen artifacts have been found and reported from muck deposits on six stream courses in the vicinity of Fairbanks. All but three were found during the last three of these years. It will be evident that the exact location of such artifacts exposed by hydraulic methods is usually uncertain, but a few have been found frozen in situ at great depths and in apparent association with Pleistocene fauna. Mr. Peter Maas, an employe of the Fairbanks Exploration Company, made the most remarkable discoveries of this kind at Ester Creek, where he found two flint points resembling the debated "Yuma type" frozen in situ at a depth of sixty feet from the original surface of the valley. One of these was described by Mr. Maas as in direct association with the maxillary bone of a young mastodon. Another "Yuma" type point was found at Goldstream, not actually in situ but under circumstances which convince the writer that it came

Fig. 16.— Implements found in Pleistocene "muck" deposits, Tanana Valley. 1–2. Flint blades found at Goldstream; 3. Flint blade found with mastodon skull at Ester Creek; 4. Polished bone point, Goldstream. (Natural size, except No. 4 which is $\frac{1}{2}$ size.)
from the base of the muck deposit in a section containing Pleistocene mammal bones.

Other artifacts from these deposits include long, polished bone points, flint blades, stemmed arrow or lance points of flint, retouched stone scrapers, and end-scrapers, a crude, bone, pick-like object, and two polished slate blades with bone and ivory handles. Some of the objects may have been on or near the surface originally but others are quite certainly from the lower levels of the muck. Although burned stones and one large collection of young mammoth teeth, suggesting human habitation, have been found, no actual camp-site or habitation refuse has been located. It is obvious that the significance of these scattered discoveries will not be known until an actual refuse deposit is located, but they offer a good indication that such a deposit will be unearthed eventually for systematic excavation. Certainly, if conclusive evidence of early man in Alaska is to be found, the wholesale hydraulic excavations offer a remarkable opportunity for such a discovery.

In these investigations I have been primarily concerned with the possibilities of archaeological research in central Alaska, since before 1933 not a single productive site had been found in the entire area. In two seasons of research we have accumulated very small collections, (approximately 1000 recognizable artifacts) but we have found numerous old Athapascan sites through inquiry among the natives which will make it possible to reconstruct the aboriginal Athapascan culture of inland Alaska, and from this to determine the significance of accidentally discovered artifacts from undateable sites.

Through white settlement we have found a type of flint material, related to pre-neolithic implements in Asia, which at present, has not been specifically correlated with Athapascan culture and which may be much older. From late Pleistocene deposits, sluiced out in placer mining operations, we have obtained a number of artifacts which suggest that men were contemporary with extinct mammals in Alaska, particularly since similar artifacts have been found with the same extinct mammals in southwestern United States. The only conclusion to be drawn at present is that productive archaeological research can be carried out in this region. If we assume that inland people of Asia would follow in

411 What appear to be the same long, polished bone points, were found by Dr. Edgar B. Howard in direct association with mammoth bones, in New Mexico. Science News Letter, March 20, 1937.

412 One of these is an Eskimo "woman's knife" with a walrus ivory handle. The other resembles an Eskimo "man's knife." They are the only typical Eskimo implements found in central Alaska.
America a route of migration inland where the environment would be familiar to them, we may well expect to find evidence of late glacial or early post-glacial human migration from northeast Asia to continental America in the Yukon and Tanana Valleys which were both ice-free corridors to interior Canada in glacial times. Some evidence of such migration has been found but it is certainly not conclusive, and this summary only pretends to point out methods of approach, and a framework for future research.