

MIDDLE HOLOCENE HUMANS IN THE YUKON-CHARLEY RIVERS NATIONAL PRESERVE, ALASKA

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ABSTRACT

In 2008, Central Washington University archaeologists in collaboration with the National Park Service conducted limited subsurface testing at the Slaven's Roadhouse site (CHR-00030) at the confluence of Coal Creek and the Yukon River about 100 km upstream from the town of Circle, Alaska. Slaven's is the location of a historic building, but of interest are deeply stratified alluvial deposits likely spanning the entire Holocene and latest Pleistocene. We excavated three 1 m x 2 m units to discover a buried cultural layer around 50 cm below the surface associated with a layer of timbers. The timbers date to ~2500 BC and may comprise a Northern Archaic cultural feature. Although the cultural assemblage is small, dated finds from this region are rare and the excellent stratigraphic context and chronological control make it worth reporting.

INTRODUCTION

Detection of archaeological material is often difficult in the Alaska boreal forest, especially when the objects of interest are small, flaked-stone artifacts. Many areas are characterized by thick, continuous ground cover and tussocky terrain that severely limit travel. Though not ideal, one way to overcome this is to survey along exposed cutbanks of active streams when access to higher positions is limited due to loose sediments or steep slopes. Another strategy is to implement exploratory subsurface testing on landforms, such as alluvial terraces, at the confluences of streams thought to have been used by humans in the past.

Few stratified sites are known for Yukon-Charley Rivers National Preserve, even though the region likely has a very long history of human use and deep, stratified deposits. In 2008, we excavated three 1 m x 2 m test units using an exploratory strategy at the Frank Slaven Roadhouse site (CHR-00030) and discovered a buried

flaked-stone projectile point associated with a burnt timber feature of possible cultural origin.

The Frank Slaven Roadhouse site is a historic log and wood-frame building and associated outbuildings constructed about 1930; it is maintained and administered today by the National Park Service within Yukon-Charley Rivers National Preserve. The site is situated on a high bench at the confluence of Coal Creek on the left bank of the Yukon River (65°21'02"N, 143°07'12"W) (Figs. 1 and 2). The preserve is part of the Yukon-Tanana Uplands and characterized by rounded, even-topped ridges and low hills; peaks of the Ogilvie Mountains at the headwaters of the Charley River reach over 1,500 m (Brabets et al. 2000).

The Yukon River and its larger tributaries contain expansive areas with deep, stratified alluvial deposits that may contain buried cultural material. Thorson (1982) identified at least four Yukon River terraces, which he labeled Y4 to Y1 from oldest to youngest with age estimates

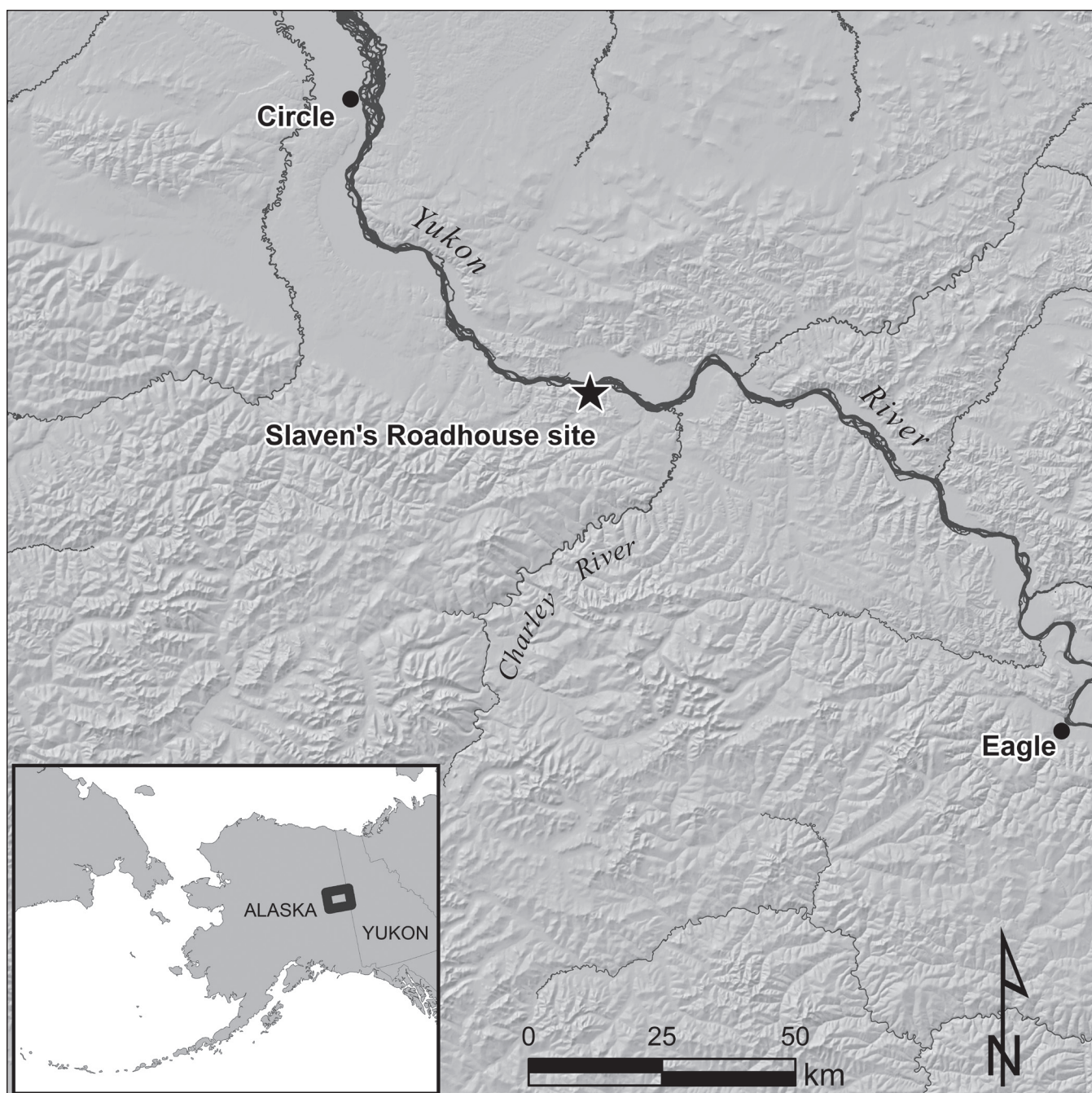


Figure 1. Map showing the location of Slaven's Roadhouse (CHR-00030) between Circle and Eagle in east-central Alaska.

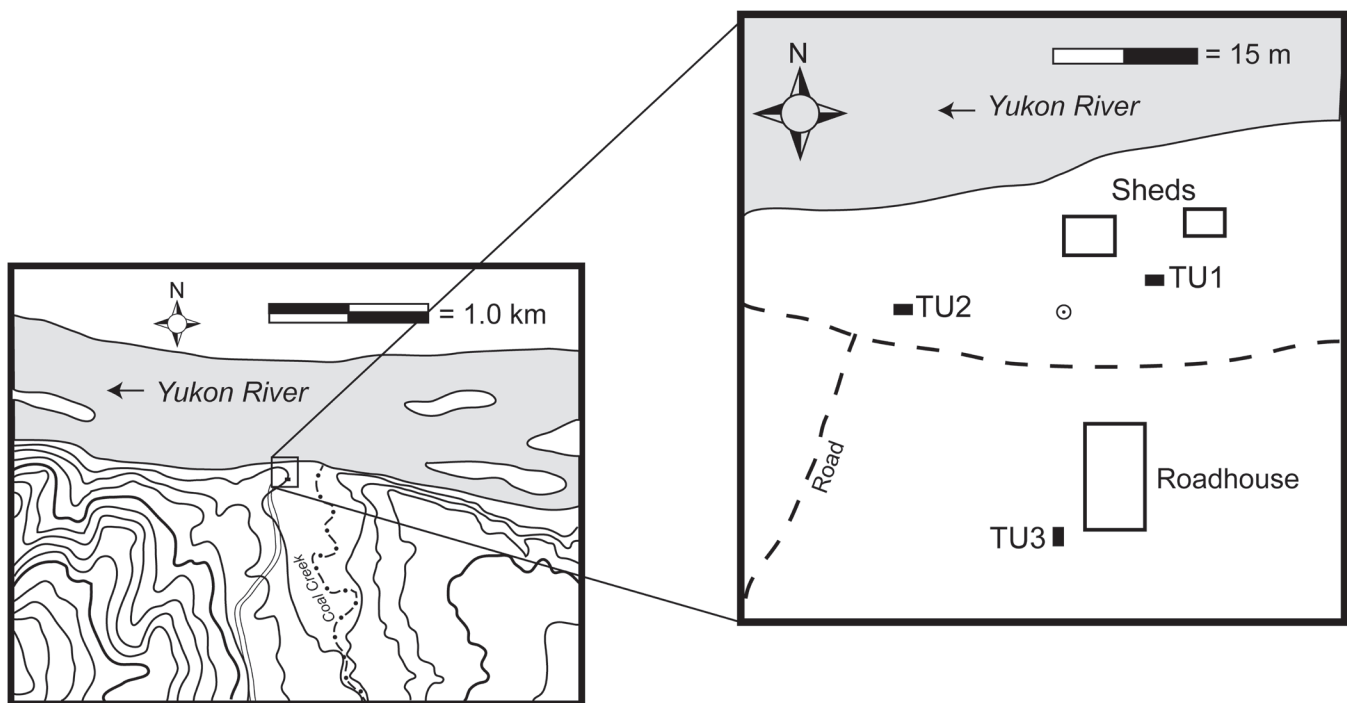


Figure 2. Map of Slaven's Roadhouse area showing the locations of the excavation units in relation to the Yukon River and historic structures.

from the middle Pleistocene for the highest surfaces to the middle Holocene for some of the lower formations. He also reported four terraces of various ages and heights associated with major tributaries of the Yukon, labeled T4 to T1 from oldest to youngest. Slaven's Roadhouse is likely located on either Y2 or T2, which Thorson (1982) contends date between around 50,000 and 13,000 years ago. In addition, recent geological work has begun to identify and date specific landforms (i.e., river terraces) (Buvit and Rasic 2010), tephra layers (Froese et al. 2005; Mason and Beget n.d.), and paleosols that provide independent dating controls for archaeological materials.

Archaeological potential in the upper Yukon River region is thought to be high for a variety of reasons. Adjacent areas of central Alaska contain sites approaching 14,000 ^{14}C BP that are among the earliest in North America (Hoffecker and Elias 2003; Holmes 2001, 2012). As such, the massive and productive Yukon River is likely to have been a focus of human subsistence and an important route of travel considering the area has not been extensively glaciated since the early-middle Pleistocene-age Charley River Glaciation (Weber 1986), constrained to 560,000 to 780,000 years ago (Froese et al. 2003). Important sites dated to the middle Holocene and assigned to the Northern Archaic Tradition, such as Charley River 1 and

Red Ochre, are located nearby (Esdale 2008). The Han (Crow and Obley 1981; Mishler and Simeone 2004) and Gwich'in (Arndt 1996:199–202; Slobodin 1981) inhabited the region in the historic period; archaeological manifestations of Athapaskan villages, hunting and trapping locations, and camps are present.

The upper Yukon River region is therefore likely to have a long history of human occupation, and it exhibits the proper geological context for the preservation of archaeological sites; however, there are surprisingly few sites in the area that have been identified or subject to even small-scale subsurface testing. Among these is the Twelve Mile Bluff (CHR-00007) locale (West et al. 1965). Located on the top of a prominence above the Yukon River downstream from Circle, the site was subject to approximately 40 m² of test excavations in 1963 and 1964. The site is undated, but was assigned to the mid-Holocene Northern Archaic period based on the presence of side-notched bifacial projectile points and notched pebble tools. Some 35 formed or utilized tools and approximately 2000 pieces of flaking debris were reported.

Further upstream in Canada stratified sites include Moosehide (LaVk-2) and Forty Mile or Ch'ëdä Dëk (LeVn-2). The Moosehide site, located two miles below Dawson in the Yukon Territory, contains three components, one

dating to the early Holocene (c. 6950 cal BC), one to the middle Holocene with microblades and side-notched projectile points, and one to the historic period (AD 1730) (Jeff Hunston, written comm.). Excavations at the Forty Mile site, located near the Alaska-Canada border at the mouth of the Fortymile River, revealed historic, protohistoric and prehistoric components dating to as old as 2300 years ago (Hammer and Thomas 2006).

Few known prehistoric sites, fewer excavated assemblages, and even fewer collections from stratified contexts exist. With this in mind we aim to put on record our admittedly preliminary results from test excavations at Slaven's Roadhouse. A factor contributing to the significance of Slaven's and other sites in Yukon-Charley is the geological contexts in which they are likely to be found. Deposits along this stretch of the river are primarily low-energy, fine-grained overbank alluvium and loess or eolian sand (Froese et al. 2005; Livingston et al. 2008), charac-

teristics shown to be highly conducive to site preservation and dating (Bettis and Mandel 2002; Guccione 2008; Guccione et al. 1998).

RESULTS

Our focus will be limited to Test Unit 3 where we discovered the buried projectile point and timbers. Stratigraphically, the Test Unit 3 profile is divided into five layers (Figure 3). Unit I is very dark grayish brown (10YR3/2) exhibiting interlaminated bedding and loamy texture. A wood sample produced a radiocarbon date of 2515 cal BC (3970 \pm 40 14 C BP) (Beta-258420) (Fig. 3, Table 1). Continuing upward through the profile, Unit II is a massively bedded, dark olive brown (2.5Y3/3) clay loam layer in which the flaked-stone projectile point was discovered. At the top of Unit II is a layer of timber directly overlying the artifact. A piece of wood from the base of the timbers was radio-

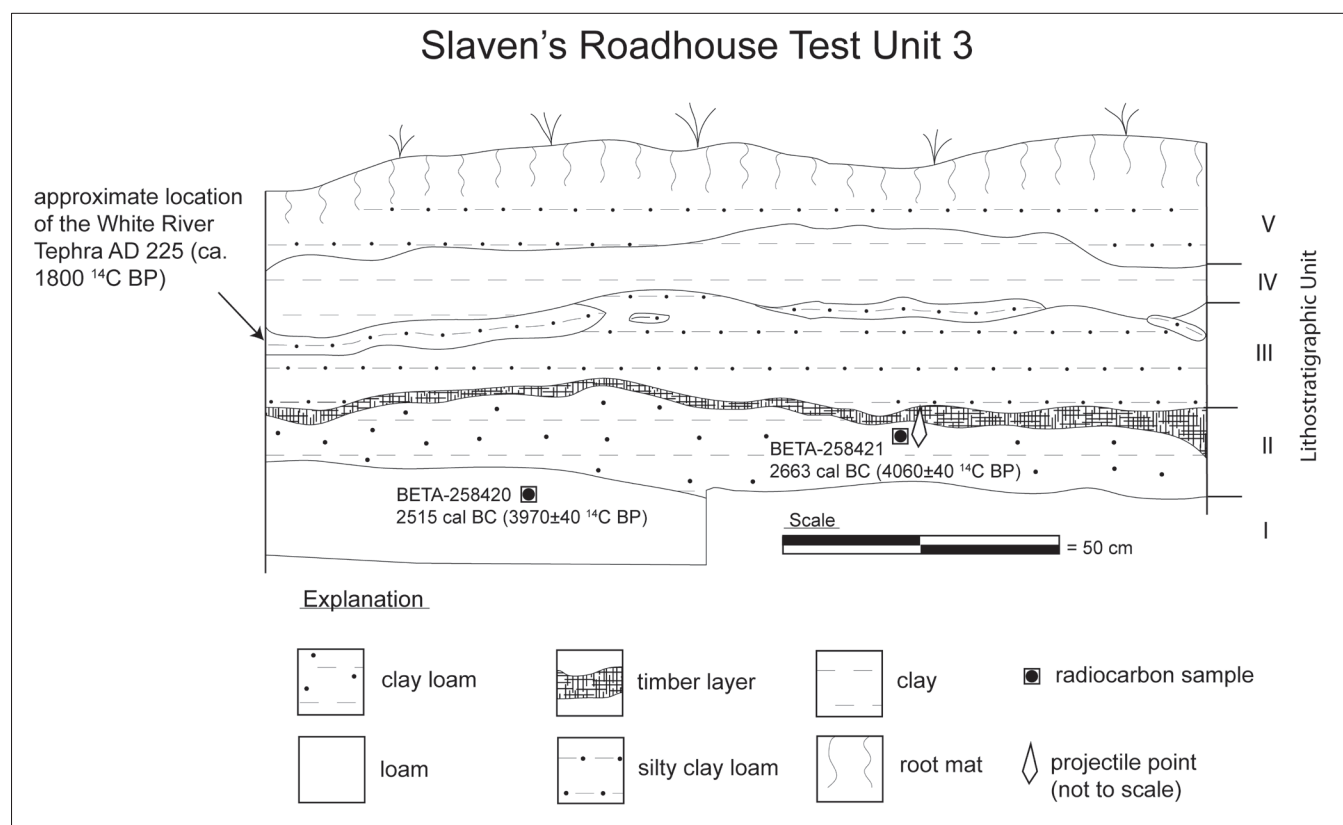


Figure 3. Stratigraphic profile of Test Unit 3.

Table 1. Radiocarbon AMS dates from Test Unit 3 at Slaven's Roadhouse. Calibration follows Reimer et al. (2004).

sample #	^{14}C age yr BP	$\delta^{13}\text{C}$ (‰)	cal age range BC (1 σ)	material
Beta-258420	3970 \pm 40	-25.6	2570–2460	wood
Beta-258421	4060 \pm 40	-23.9	2830–2490	wood

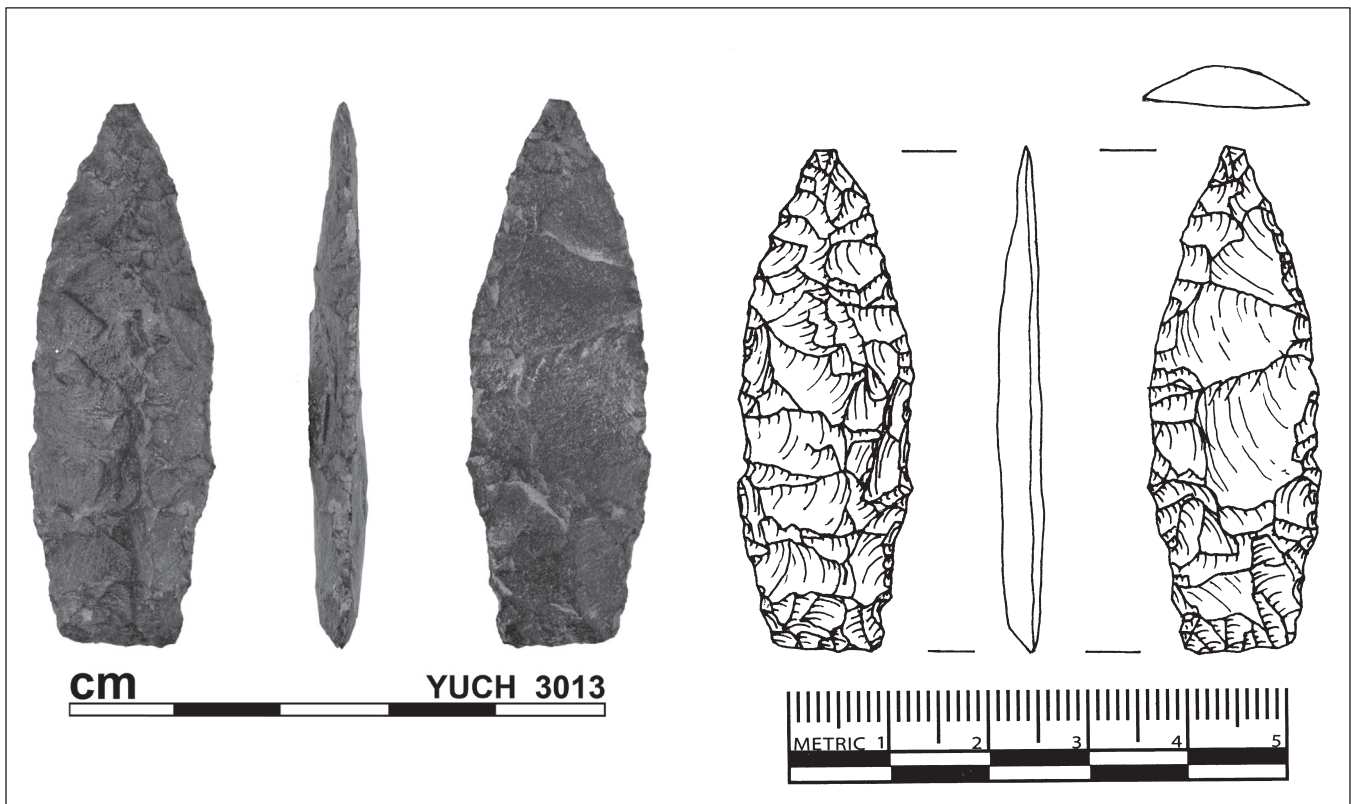


Figure 4. Projectile point from Slaven's Roadhouse. Dimensions: 50.3 mm long; 4.0 mm maximum thickness; 16.4 mm maximum width; 5.04 g. Line drawing by Sarah Moore.

carbon dated to 2663 cal BC (4060 ± 40 ^{14}C BP) (Beta-258421). Unit III, a bed of silty clay loam, exhibits massive bedding and dark olive brown color (2.5Y3/3). In addition, several organic-rich darker lenses were discovered at the top of Unit III. Elsewhere in the excavation unit, remnants of a tephra were identified. Although no samples were collected, it is likely the White River Ash based on its stratigraphic position, thickness, color and texture compared to studies of known exposures widely distributed across the region (Clague et al. 1995; Lerbekmo 2008; Lerbekmo and Campbell 1969; Robinson 2001). Unit IV is a very dark gray (2.5Y3/1) clay bed. Finally, Unit V is a massively bedded, very dark grayish brown (10YR3/2) silty clay loam layer on which the modern root mat is developing.

The laminated bedding in Unit I at the base of the exposed profile indicates a likely fluvial origin of these sediments. We cannot say for certain whether the upper layers are also alluvia, but given the general fining-upward character of the set, they could reflect low-energy overbank deposits from the Yukon River or Coal Creek. Otherwise, units II–V could be eolian in origin. Regardless, the projectile point and timbers are associated with what is, and

was at the time of occupation, a high, stable landform. Statistically, the radiocarbon ages from the profile are equivalent (Table 1), indicating rapid deposition of the sediments between the dated samples (i.e., Unit II).

The projectile point is a lanceolate form with a straight base made of a dark gray, coarse-grained chert (Fig. 4). It is complete and relatively small, measuring 50.3 mm long. The lateral cross-section is plano-convex in shape, which reflects its production from a flat flake blank that was minimally worked on its ventral surface. Flaking on the opposite face is non-patterned, and the size and spacing of flake scars indicate that the artifact was entirely shaped through pressure flaking. There is no evidence of purposeful haft modifications; the lateral margins of the projectile point are not ground or polished. A subtle indentation at the proximal end, however, gives the impression of a stemmed basal shape, but this is more apparent than real, and results largely from removal of a single flake on one face rather than a purposeful effort to produce a stemmed hafting element. The opposite margin lacks any sign of a stemmed shape. The biface is interpreted to be a finished tool rather than a preform given its refined shape and carefully flaked margins; its function is interpreted to

be a projectile tip due to its pointed, symmetrical shape, although a hafted knife or multipurpose knife-projectile function is also possible. No diagnostic use traces were observed under low magnification. Aside from the lithic projectile point, several nails, glass fragments, plastic and other pieces of modern refuse were recovered from the root mat. It is possible that the timbers overlying the biface at the top of Unit II represent a cultural feature. Without continued excavations, though, it is difficult to confirm.

DISCUSSION AND CONCLUSIONS

The form and technology of the Slaven's biface have not been clearly recognized in the region for this time period. While side-notched projectile points are emblematic of this period and are characteristic of assemblages assigned to the Northern Archaic Tradition, their technological and morphological variation, and the degree to which there is chronological patterning in this variation, is still only provisionally understood (Esdale 2008; Hare et al. 2008). Much less is known about technologies that fall in the lanceolate and leaf-shaped category like the Slaven's biface. Among the few examples reported in the literature is a specimen illustrated by Workman (1978:498) from the Chimi site in the southern Yukon. It is similar to the Slaven's biface in size and shape, and derives from a similar method of manufacture. Both artifacts were produced with a frugal approach to biface manufacture, which involved minimal flaking of a flake blank that left substantial unworked remnants of the original blank. The Chimi artifact unfortunately derives from an undated surface context. Of note, however, is that it was highlighted as unique among the extensive collections from Chimi, which included eight classes of bifacial projectile points from the middle Holocene-age Taye Lake component. Likewise, Hare et al. (2008:331) recognize a "Constricting Base Point" class among their database of more than 500 hafted bifaces from the Yukon Territory; the Slaven's specimen falls most clearly within this class. It is, however, described as a provisional artifact class limited to only five undated pieces. None of the directly dated stone projectile tips from ice-patch finds in central Alaska, Yukon, or Northwest Territories compare well with the Slaven's biface (Dixon et al. 2005; Hare et al. 2008, 2012). This is perhaps unsurprising given the riverine setting of the Slaven's site compared to the montane context of the ice-patch finds and the contrasting activities expected in such different ecological settings.

While the preliminary results presented here are far from a full description of the technological complex of the prehistoric inhabitants of the Slaven's Roadhouse site, a few useful facts can be added to the valuable database of sites and artifacts from well-controlled stratigraphic contexts. One contribution is good chronological control for a projectile point or hafted biface of the sort that has potential as a chronological marker. This work demonstrates a need to conduct intensive testing in order to locate sites with low artifact densities. Such sites, like Slaven's Roadhouse, may provide good stratigraphic contexts and clear chronological control.

The presence at Slaven's Roadhouse of a prehistoric artifact in a buried, dateable context demonstrates that the potential exists for more significant archaeological discoveries along this stretch of the Yukon River. Continued work that defines the terrace systems of the Yukon and its major tributaries, including where Slaven's is located, will provide an important baseline for future archaeological studies. This strategy, using historic geomorphology, was applied to Pleistocene-age landforms in Central Alaska where Hoffecker (1988) created a predictive model based on the estimated ages of glacial-fluvial and alluvial formations. A similar study in Yukon-Charley Rivers National Preserve, where sites can often only be detected through exploratory subsurface testing, would be highly informative.

Currently, a relatively large number of late Pleistocene through Holocene sites are known from central Alaska, generally found along highway corridors. But despite intensive and extensive surveys of exposed cutbanks along this stretch of the Yukon River, very few sites have been discovered; nearly all have dated to the late Holocene (following the White River Ash fall). Why the difference? We suggest it results from the deep stratigraphic exposures in central Alaska (e.g., at roadcuts), the accessibility of these areas, and the region's long history of research. The paucity of early sites along the upper Yukon River, in contrast, is a manifestation of sampling rather than an indicator that people did not use this area in the past.

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