

# Late Archaic Landscapes: Greater Yellowstone Ecosystem, Absaroka Range, Northwest Wyoming

Jonah Buxton (GRSLE), Lawrence Todd (GRSLE), Daniel Dalmas (Iowa State), William Dooley (GRSLE)

## NW WYOMING EXCAVATED RECORD: SURFACE LATE ARCHAIC SITES CONTEXT

Over the last 17 field seasons the Greybull River Sustainable Landscape Ecology (GRSLE) archaeology project (Todd 2015) has undertaken inventory and very limited test excavations in the Washakie Wilderness and adjacent portions of the Shoshone National Forest in northwest Wyoming. Although this project has been able to inventory only about 0.7% of the Washakie Wilderness, data from the over 190,000 artifacts recorded provide the basis for developing refined research questions.

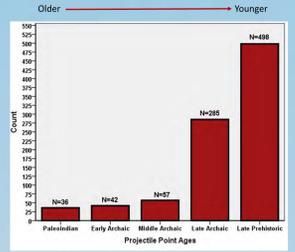


Figure 1. Summary of temporally diagnostic points recorded by GRSLE project (2002-2018).

Of the most abundant projectile point types (based on in-field morphological cross-dating) Late Archaic make up 31% of the diagnostic projectile points recorded (Figure 1). Examination of the landscape scale patterning in these artifacts has the potential to add interpretative dimensions not available through consideration of only the record revealed through excavation. The chronometric and contextual basis for ascribing surface points from the GRSLE project to Late Archaic is the chronostratigraphic sequences developed at key regional sites such as 48PA201 and refined at near-by single component sites like Pagoda Creek.

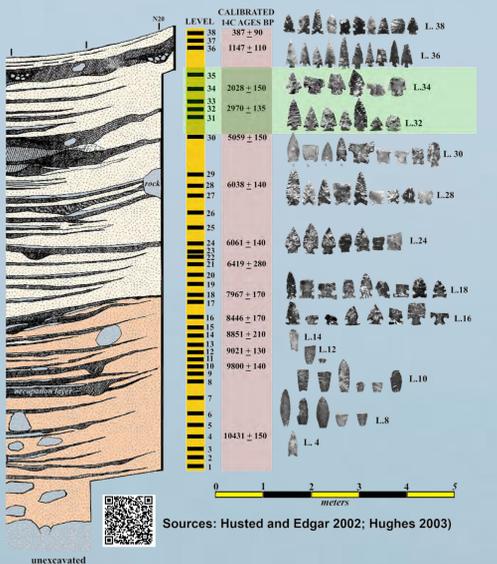


Figure 2. Regionally reference chronostratigraphic sequence at 48PA201.



Figure 3. Recently re-documented Late Archaic points from 48PA201 (Reckin and Todd nd).

Excavations at two sites along the Shoshone River, just north of the Washakie Wilderness project area, Mummy Cave (48PA201; Husted and Edgar 2002; Hughes 2003) and Pagoda Creek, Eakin 1989) although at lower elevations than most of the GRSLE research (1900 and 1800m elevations respectively), both attest to the importance of bighorn sheep hunting to Late Archaic peoples. 48PA201 is a rockshelter that with a relatively small, but stratigraphically complex (Figure 2) depositional history that include five Late Archaic occupation levels. Pagoda Creek is a large open site with two distinct levels representing a limited span of occupational use (Figure 4). Based on tooth eruption and wear, both sites are interpreted to have included winter bighorn sheep procurement and processing.

Additional work is being undertaken with collections from both sites, both in terms of the chipped stone (Figure 3) and faunal assemblages. As with Pagoda Creek, additional radiocarbon dating of the 48PA201 sequence is planned.

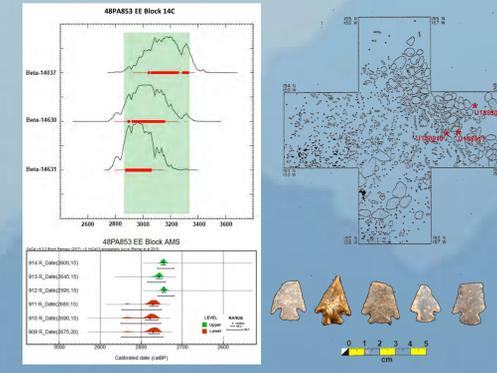


Figure 4. Information from 48PA863, which has recently been listed on the NRHP, provides a series of new dates for an important Late Archaic winter occupation (Eakin ).

As part of a long-term research project focused on high elevations (>2500m) in Wyoming's Absaroka Mountains, locations of 286 projectile points have been recorded and assigned to a Late Archaic age based on morphological cross-dating. Spatial patterns in these artifacts, in comparison to other materials (ranging in age from Paleoindian to Protohistoric in age) provide hints of Late Archaic mountain landuse. Comparison of this extensive surface sample with collections from near-by excavated sites (Mummy Cave, 48PA201 and Pagoda Creek, 48PA853) provides further insights into distinctive features of montane and alpine settlement systems. Several localities recorded during the 2018 field season from elevations ranging from 2700-3200m are presented as examples of variation in the region's high elevation Late Archaic assemblages.

## 2002-2018 GRSLE PROJECT: LATE ARCHAIC LANDSCAPE

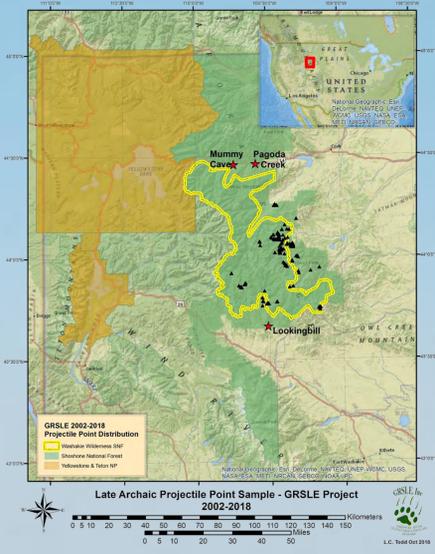


Figure 5. Since 2002, the GRSLE project has recorded 285 Late Archaic points from the northwestern Wyoming's Shoshone National Forest.

A goal of GRSLE surveys is 100% documentation of the visible surface archaeological record at the landscape scale. Teams using GNSS Trimble Geo7's to record location, along with artifact type, material, and length (among other descriptors) of each artifact individually. This allows for landscape-scale analysis by viewing each artifact in relation to each other across the entirety of the GRSLE data set.



Figure 6. The GRSLE project is an artifact based (rather than site-based) landscape research program that has recorded locations and descriptive data on over 190,000 pieces of chipped stone. For the most part, the project is non-collection.

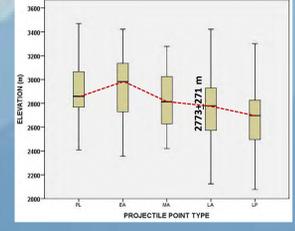


Figure 8. Late Archaic points have been found in all elevations of the GRSLE project area (mean discovery elevation of 2773 m (~9100ft)).

Table 1. The Late Archaic represents the first common use of obsidian for projectile points in the study area, with most from the Obsidian Cliff source.

Source Area	N	%	Mean Max Length (mm)	Mean Elevation (m)	N Projectile Points
Obsidian Cliff (OC)	720	69.9	19.4	2667	11 69
Timber Butte (TB)	104	9.7	23.1	2691	2 85
Big South Butte (BSB)	144	13.9	20.9	2684	2 51
Chaparral Pass (CP)	48	4.3	24.5	3292	2 31
Timber Butte (TB)	42	3.9	19.3	2625	2 31
Chaparral Pass (CP)	38	3.5	19.6	2568	1 31
Lava Creek Tuff (LCT)	23	2.1	23.9	2638	1 31
Timber Butte (TB)	11	1.0	19.9	2541	1 31
Wild Horse Canyon (WHC)	8	0.7	16.2	2700	1 31
Pagoda Creek Tuff (PCT)	6	0.5	26.2	2353	1 31
Chaparral Pass (CP)	4	0.3	18.3	2781	1 31
Timber Butte (TB)	3	0.2	21.7	2487	1 31
Timber Butte (TB)	2	0.1	17.6	2740	1 31
Timber Butte (TB)	1	0.0	16.0	2561	1 31
Big South Butte (BSB)	1	0.0	17.0	2591	1 31
Chaparral Pass (CP)	1	0.0	20.2	3254	1 31
Park Point (PP)	1	0.0	18.3	3107	1 31
Timber Butte (TB)	22	2.0	23.8	2538	1 31
Total	1074	100.0	20.2	2695	61 61 131 122

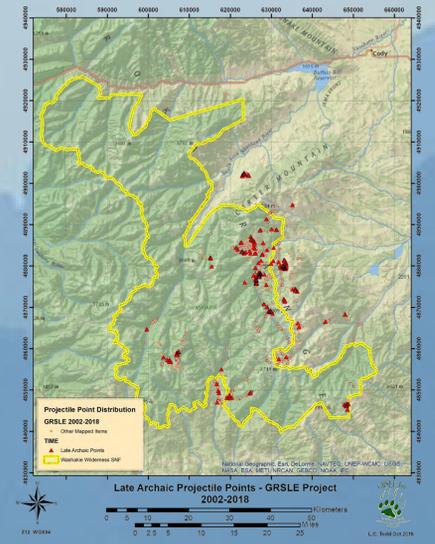


Figure 7. All Late Archaic points recorded have been surface finds, most at elevations above 2600m (~8500 ft) and many are located in the Washakie Wilderness.

## LATE ARCHAIC IN THE EASTERN GYE: GRSLE 2018

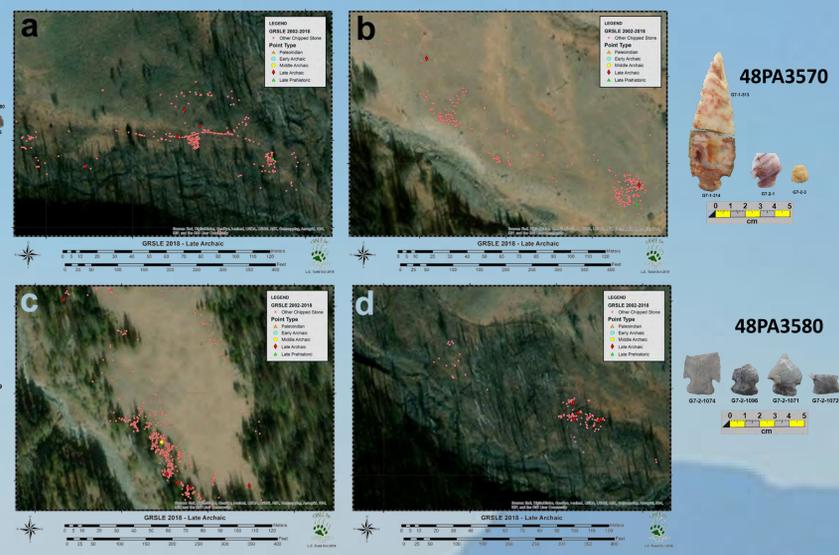


Figure 9. Four of the sites recorded in 2018 where Late Archaic points were the most common temporally diagnostic items documented illustrate a range of assemblage sizes and properties (Table 2).

Table 2. Summary of four sites with Late Archaic artifacts recorded during 2018 GRSLE research.

SITE NUMBER	ELEV (m)	AREA (m <sup>2</sup> )	PROJECTILE POINTS					MEAN MAX LENGTH (mm)	% OB	COMMENTS/DESCRIPTION	
			PALEO	MIDDLE ARCHAIC	LATE ARCHAIC	FRAGMENT - ARCHAIC	LATE PREHISTORIC				
48PA3570	3114	6074			2		1	301	22.49	0.00	High elevation open camp, Archaic and Late Prehistoric.
48PA3580	2737	864			5		236	20.04	0.00	Open camp, Late Archaic. All points of non-local quartzite	
48PA3585	2958	17357	1	1	5	1	1043	16.44	3.45	Open camp, buried material (Paleoindian, Middle Archaic, and Late Archaic artifacts)	
48PA3591	2759	7563			5	3	774	14.68	10.50	Open camp, Late Archaic and Late Prehistoric. Two Obsidian Cliff points.	

During the 2018 field season Late Archaic projectile points were the most frequently recorded type (N=18). This is in marked contrast to the pattern represented by the full GRSLE data set (Figure 1) where Late Prehistoric points predominate (making up 54.2% of the diagnostic points recorded since 2002 – while making up only 35.6% of the 2018 sample). One suggestion for the over representation of Late Archaic relative to Late Prehistoric points in the 2018 sample is that most of the year's inventory was done at elevations above 2800m, which is somewhat higher than the mean elevation where Late Prehistoric points (2705m) have been recorded in previous seasons (Figure 8).

The four sites illustrated in Figure 9 show the range in contexts (Table 2) where our higher elevation Late Archaic artifacts have been recorded (elevations ranging from 2700-3100m). While three of the sites also have points representing other time periods and indicate a long term use of the sort documented at 48PA201, one of the newly recorded sites (48PA3580) represents a discrete, perhaps single use site more similar to Pagoda Creek. While surface materials provide no clues to season or resources of use, these sites are all in prime bighorn sheep habitats and adjacent to contemporary ungulate migration corridors and we anticipate that test excavations will provide faunal remains for more comprehensive analysis.

## REFERENCES CITED

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