

Hunting Structures in the Absaroka Mountains of Northwestern Wyoming

By Christopher C. Kinneer, Lawrence C. Todd, Paul C. Burnett

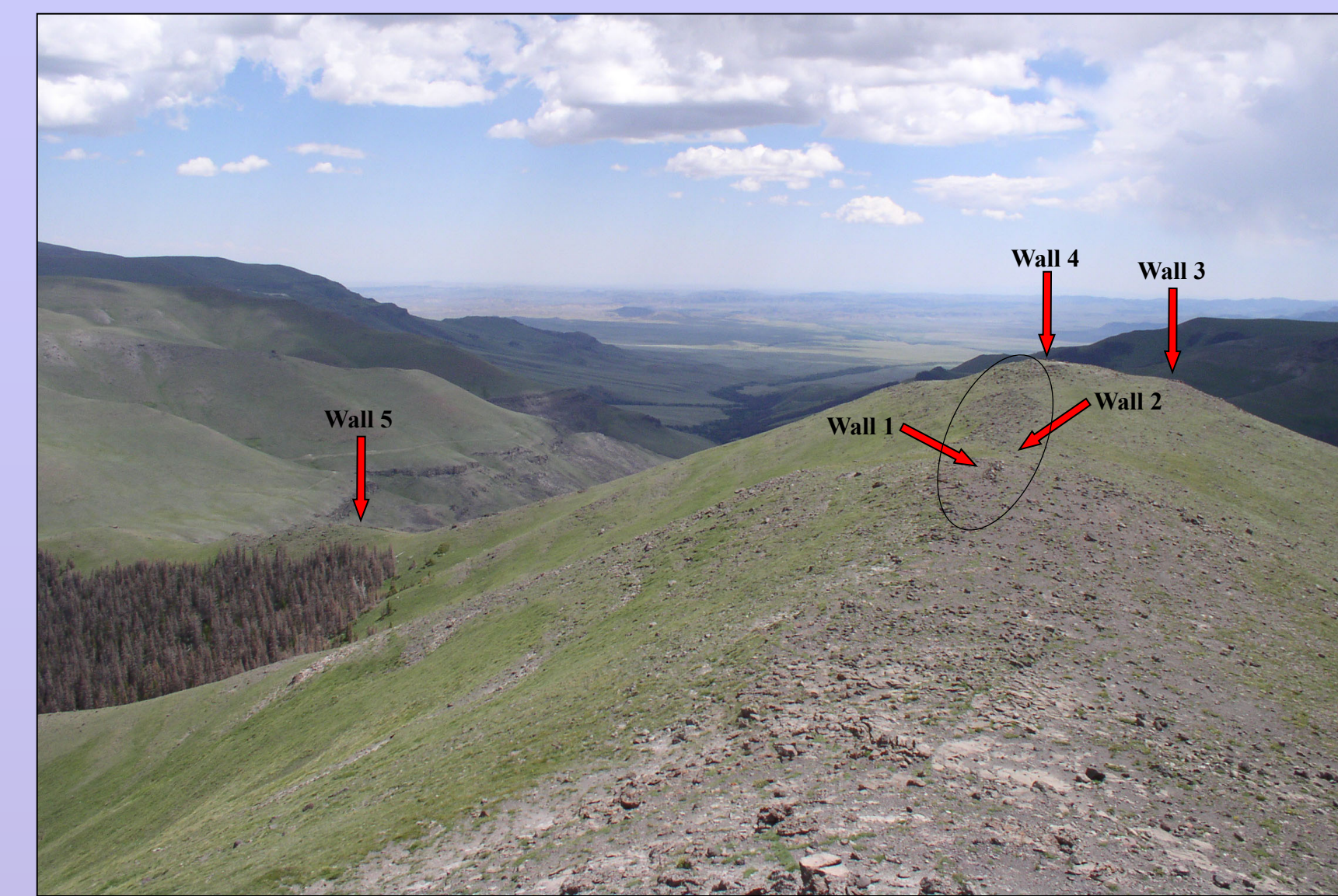
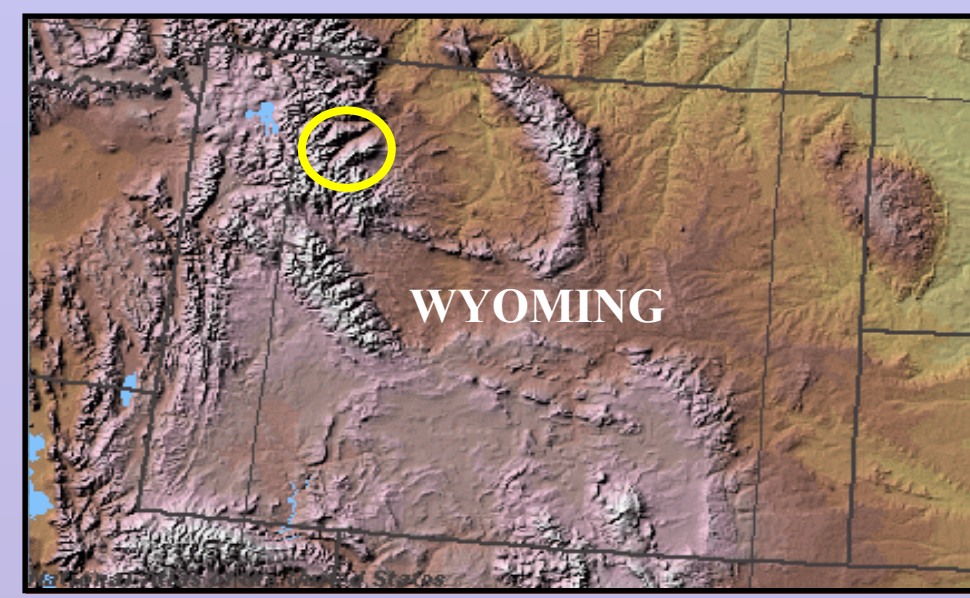
Abstract

Hunting strategies in high altitude environments often involved the systematic construction of blinds and drive walls to funnel game animals (mule deer [*Odocoileus hemionus*], elk [*Cervus canadensis*], and bighorn sheep [*Ovis canadensis*]) towards predetermined kill locations. These systems are positioned to take advantage of natural landscape attributes.

To date many of these systems have been recorded in Colorado and Wyoming (see Benedict and Frison). During the 2004 field season new hunting structures were identified in three valleys of the Greybull River watershed. Structures overlooking the Pickett Creek valley situated on open ridges and saddles (~3075-3200 m elevation) consist of stone walls, blinds, and an anomalous platform. A single enclosure was recorded on an ice-core rock glacier (~2500 m elevation) above the Wood River valley and a second isolated structure was documented near Jack Creek (~2900 m elevation). A prehistoric age for these structures is suggested by lichen bridging among the individual, dry-laid, stones. As with other such systems, no artifacts are associated with these structures.

The discovery of these structures extends the use of game procurement systems to this portion of the Absaroka Mountains and ultimately broadens the knowledge base associated with prehistoric use of the greater Yellowstone ecosystem. Additionally, the data gathered from these structures has the potential to expose predictable topographic signatures with value for understanding high elevation prehistoric hunting strategies in mountain environments.

PICKETT CREEK STRUCTURES



PT001. Site overview looking east. The narrow saddle (middle right) in conjunction with the wall structures served as a natural funnel for directing the movements of game animals.

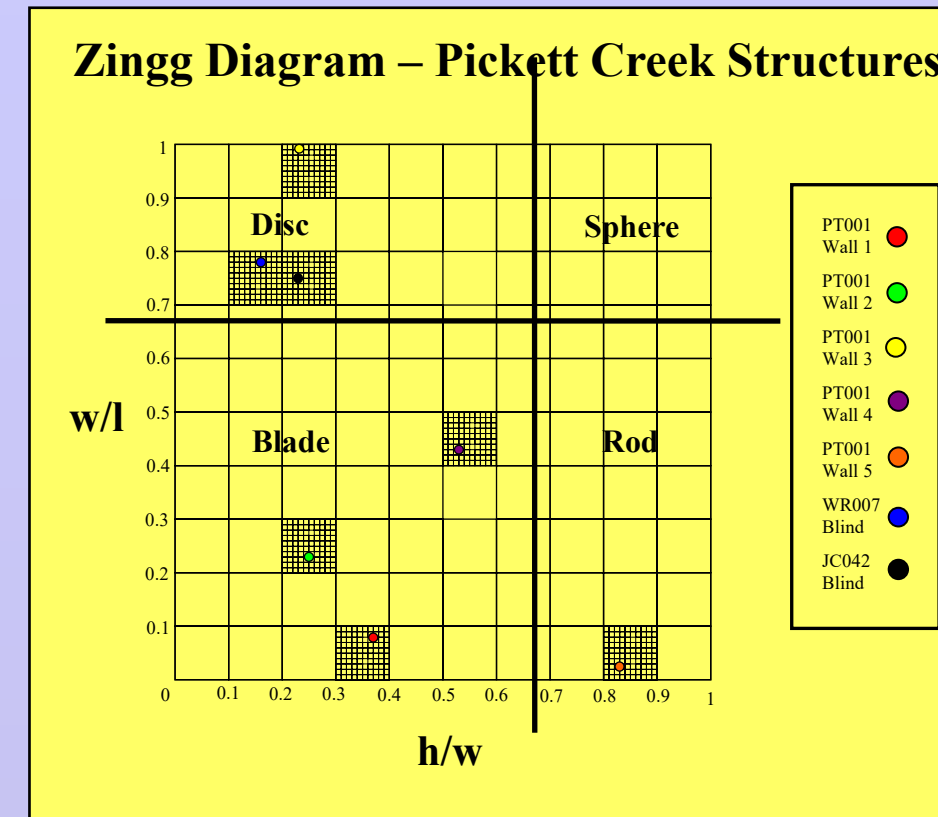
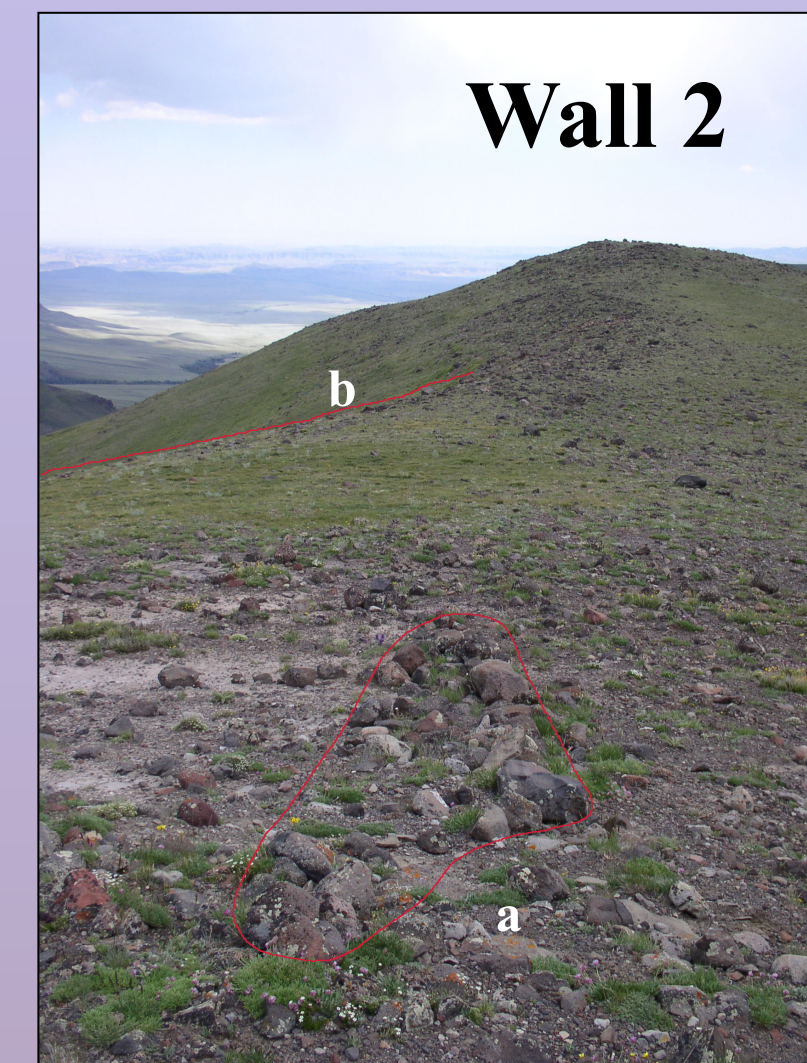


Figure 1. Quantifying structure shapes based on ratios of length, width, and height. (data summarized below).

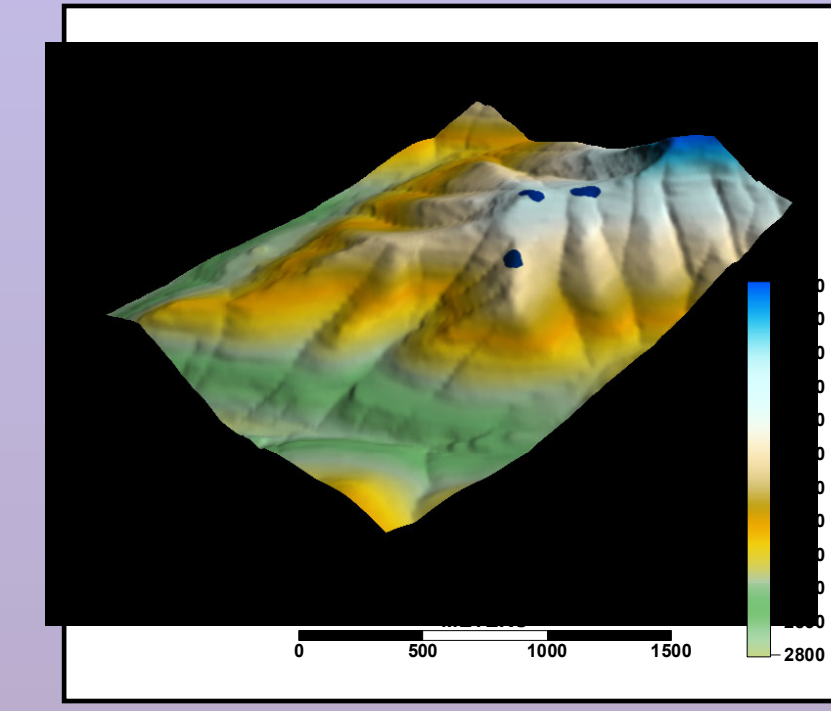
Temp.	Field Designation	UTM East	UTM North	Elevation (m)	Max. Length (m)	Max. Width (m)	Max. Height (m)	L/Axial Ratio	W/Axial Ratio	# of Cobbles	Average Size of Cobbles in cm
PT001	Wall 1	630522	4894263	3223	15.44	1.73	0.45	0.08	0.37	247	40.50 (max. 60)
PT001	Wall 2	630528	4894267	3171	11.6	0.4	0.23	0.26	1.92	75	20.20 (max. 45)
PT001	Wall 3	630510	4894176	3203	4	0.9	1	0.23	0.94	145	40.50 (max. 100)
PT001	Wall 4	630508	4894222	3207	4	1.1	0.19	0.43	0.73	1	40.50 (max. 100)
PT001	Wall 5	630489	4894360	3113	38.9	3.9	0.75	0.025	0.83	381	30.50 (max. 100)
US007	Blind 1	631102	4885064	2928	11.8	0.11	0.78	0.16	1.85	33	30.50 (max. 75)
US042	Blind 1	631164	4880058	2870	8	4.5	11.5	0.75	0.33	3	



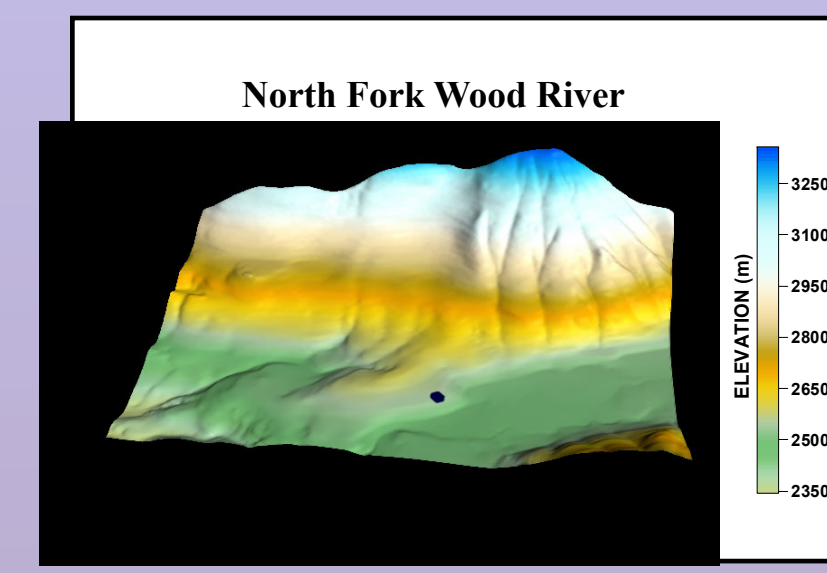
Wall 1 looking north. This was the longest and most complete of the Pickett Creek structures.



Wall 2



Digital Elevation Model of the Pickett Creek Site (PT001).



Digital Elevation Model of the Wood River Site (WR007).



Wall 1

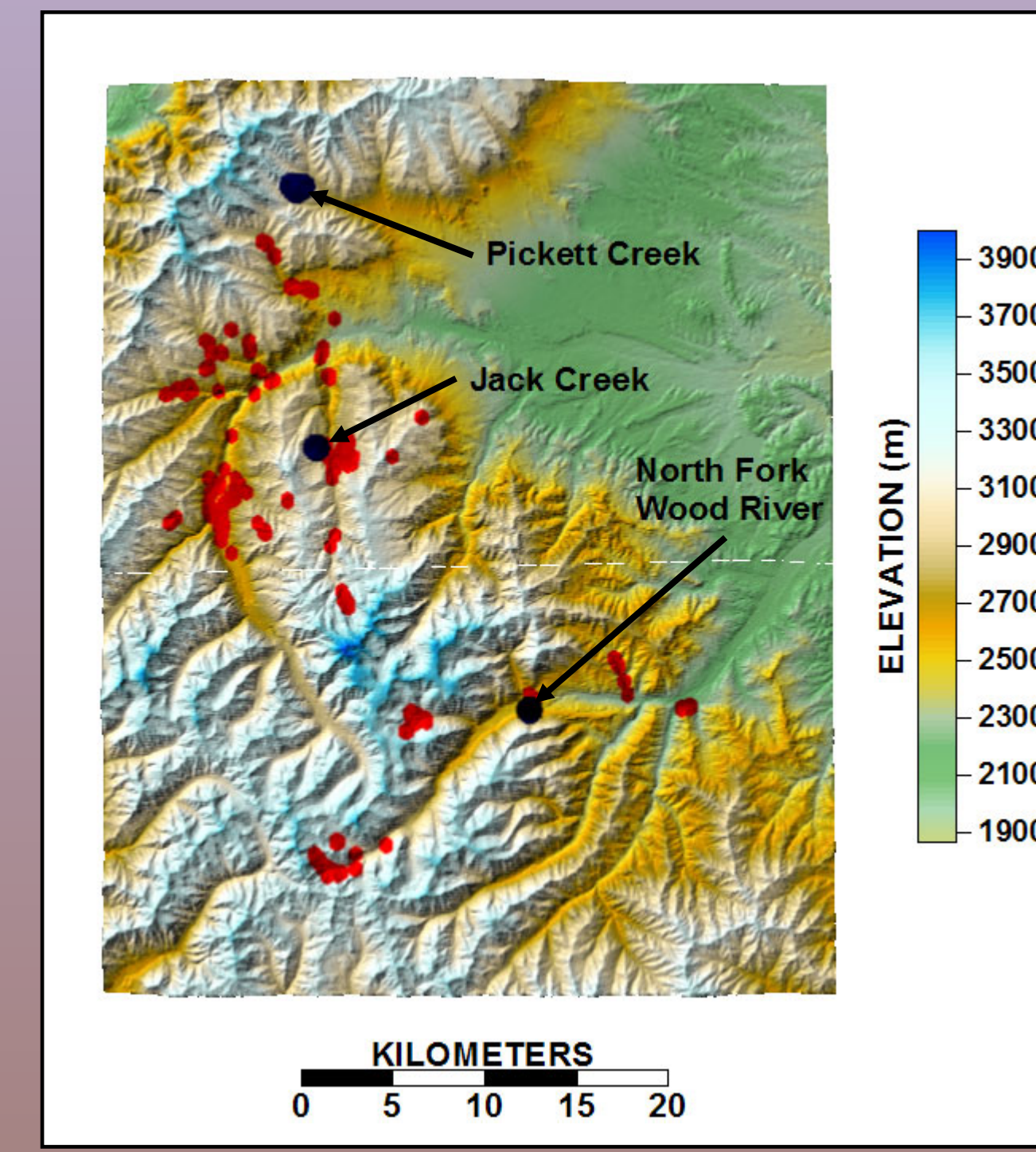
Oblique view of Wall 1. Red line indicates wall.

- a) Foreground: many of these walls are difficult to recognize. Wall 2 is indicated by a red line.
- b) Background: resistant bedrock forms a natural barrier enhancing directional control of game moving over the saddle.



Wall 2

Wall 2 looking north. Red line indicates wall.



Overview of the Greybull River watershed. Black dots indicate sites with structures. Red dots indicate concentrations of lithic material recorded during the 2002-2004 field seasons.



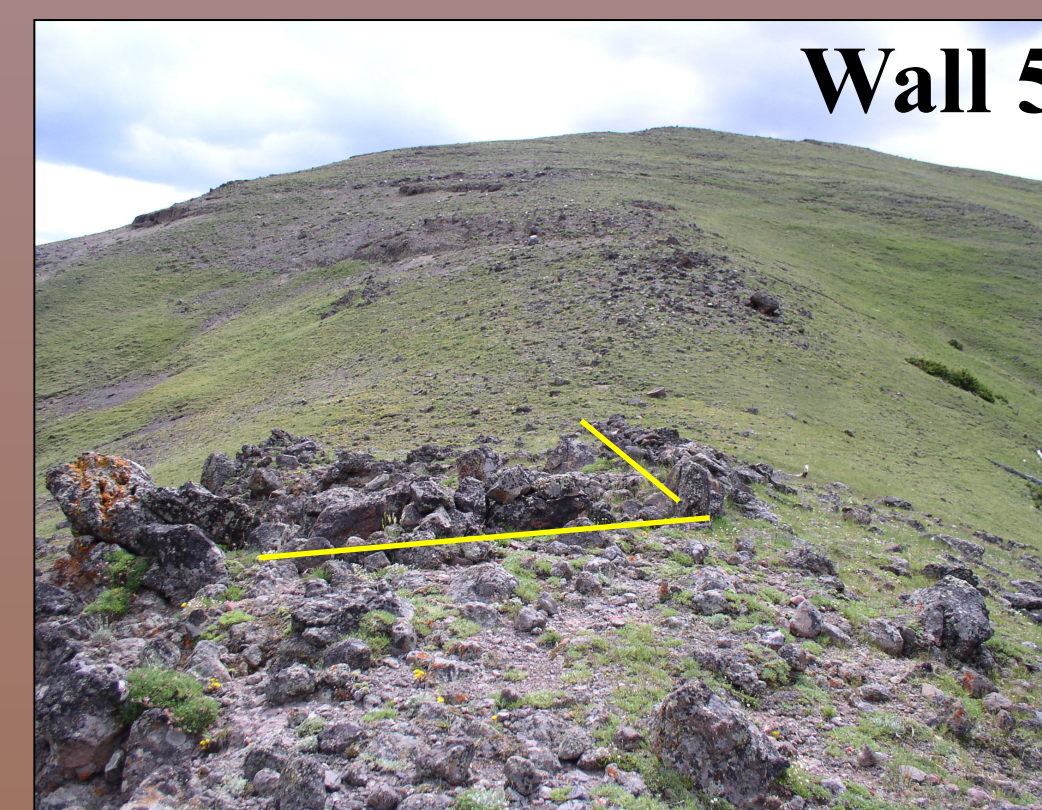
Wall 4

Wall 4 view from the base of the saddle. Red line indicates wall.



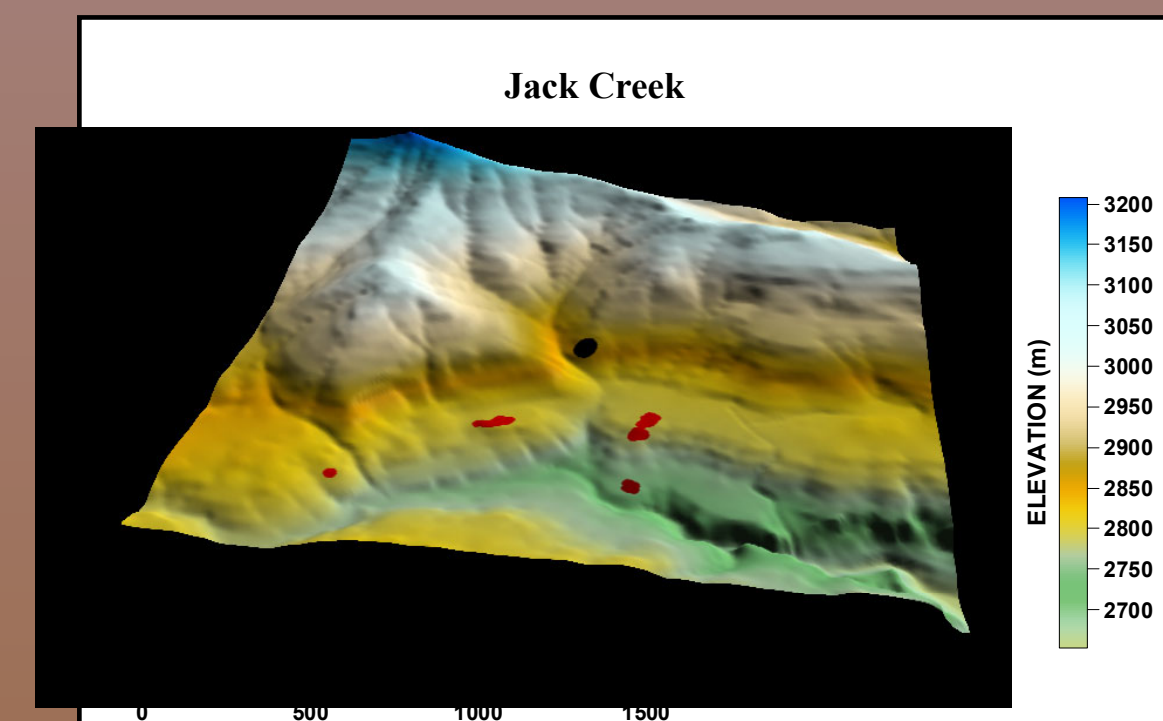
Wall 4

Wall 4 looking west. Probable blind, positioned above main saddle.



Wall 5

Wall 5 looking south. Yellow line indicates wall.



Digital Elevation Model of the Jack Creek Site (JC042).



Unrecorded blind above the Warhouse Drainage (WAR010).

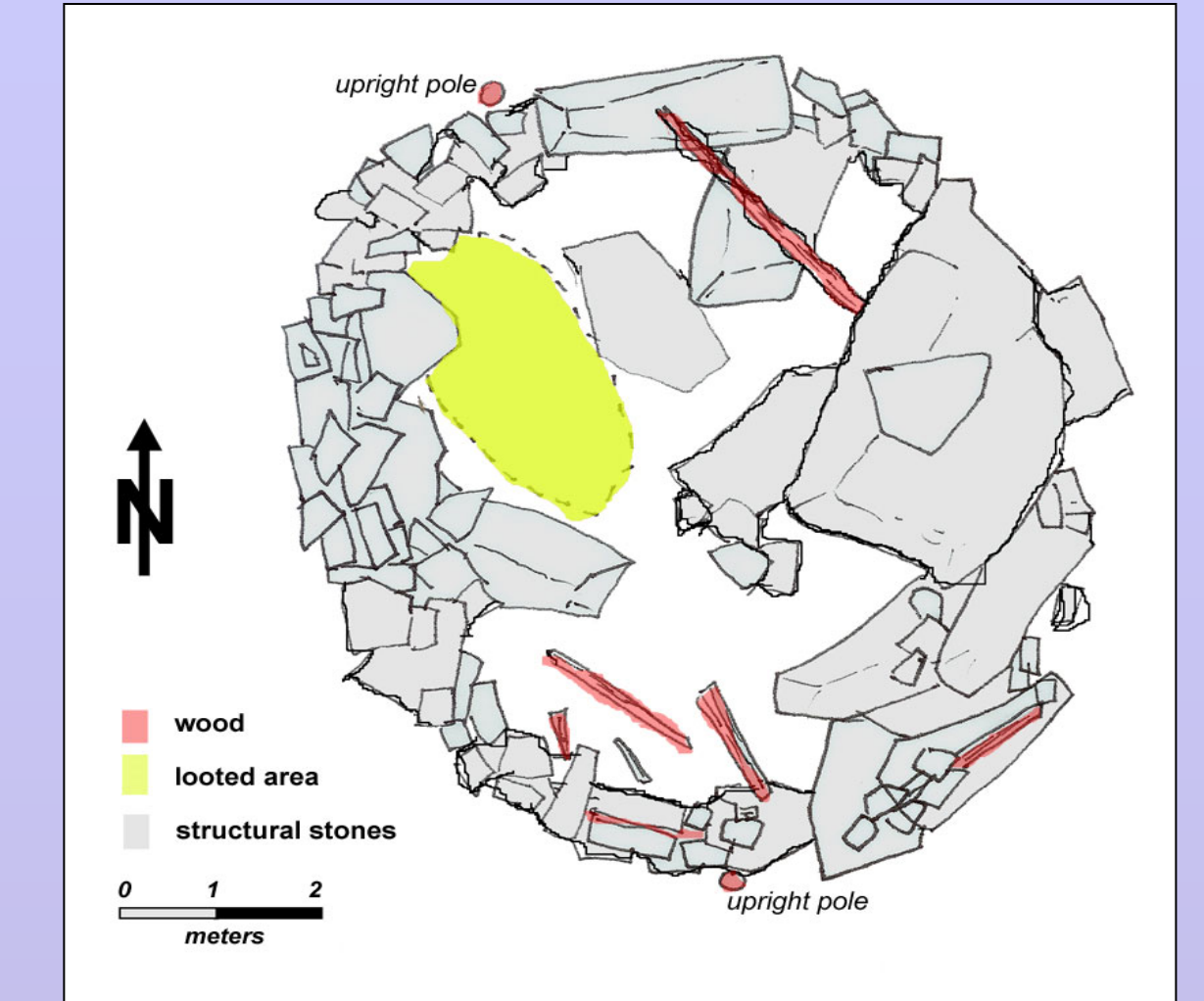
WOOD RIVER STRUCTURE



The Wood River blind. Pack marks the floor and interior walls. Talus slope in the background.



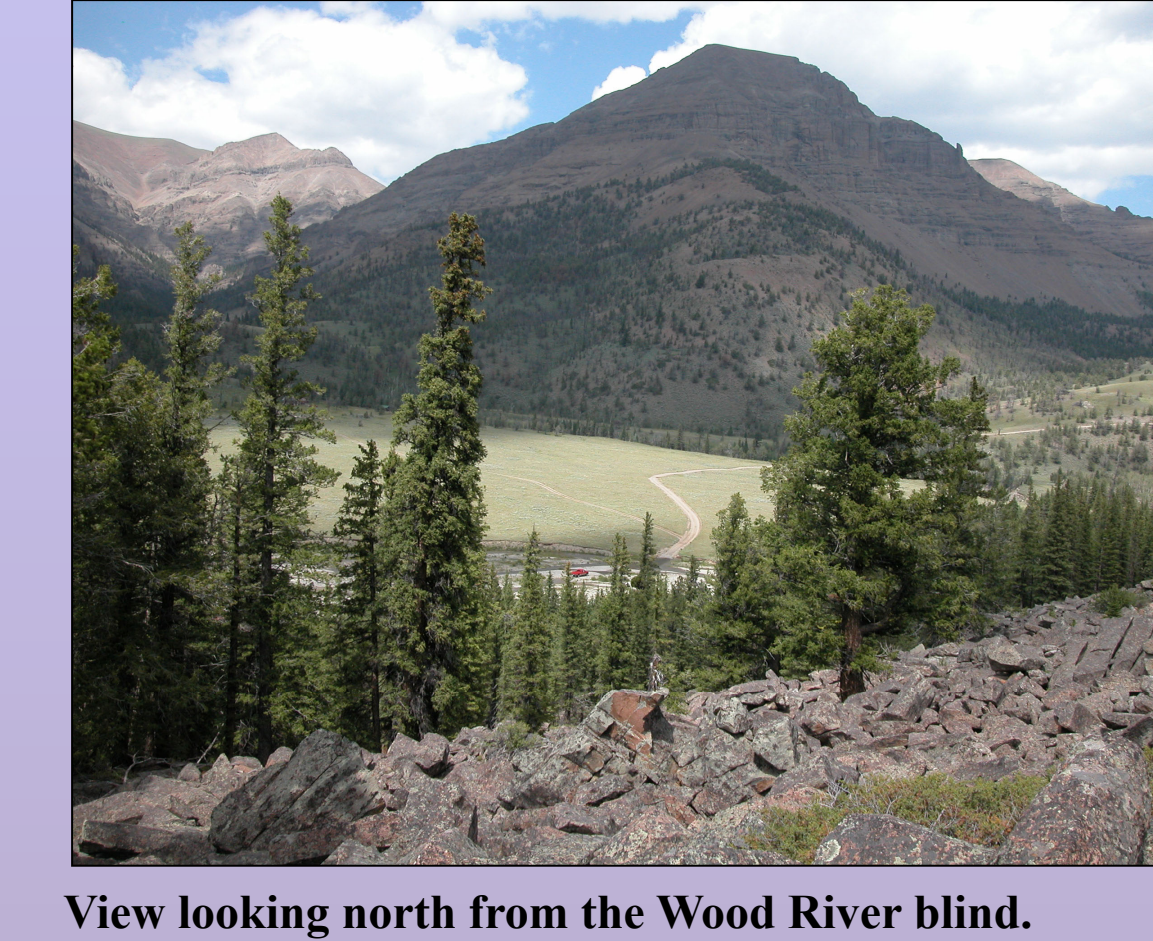
View from below the structure looking south.



Planview of Wood River (WR007) structure.



Interior of blind showing the integration of wood elements as transverse cross-beams.



View looking north from the Wood River blind.

JACK CREEK STRUCTURE



Jack Creek blind looking southeast.



Jack Creek blind looking northeast.

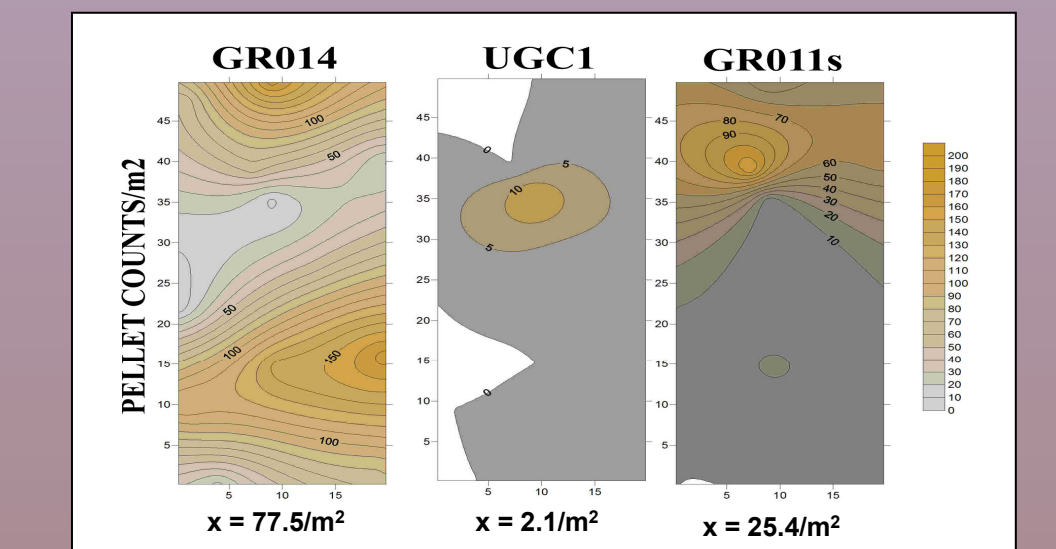


Figure 6. Example of Pellet Count.

Landscape Data:

- Slope: measured at each feature and at intervals in cardinal directions
- Aspect: directions of major landforms
- Elevation: points recorded on major landforms
- Geologic Substrate: prevalent bedrock; typically the predominant building material
- Depositional Environment: dominant depositional process occurring on site
- Water Source: nearest sources of water, both intermittent and permanent
- Wind: prevailing ground-level wind; direction and speed
- Temperature: annual temperature regime
- Vegetation Communities: particularly plant species used as forage by game
- Wet and Dry Precipitation: regional and micro-environmental precipitation patterns, including snow field data
- Modern Game: movement patterns, game trail locations, bedding areas and pellet count data (Figure 6; below)

Structure Data:

- Dimensions: length, width, height and shape quantification (Figure 1)
- Materials: quantify the number of stone and wooden elements; average sizes of stones and dimensions of wooden elements
- In-Place Elements: the number of unmovable elements incorporated into structures
- Viewshed: quantifies an individual structure, accomplished with polar coordinates
- Direction and Orientation
- Associations: relationships among structures and the physical environment (i.e. do structures incorporate tree islands or other vegetation?)

Results and Discussion:

The structures identified in the Greybull River watershed raise more questions than answers with respect to hunting strategies and patterns in this portion of the Absarokas. The Pickett Creek complex appears to be similar, at least in some respects, to drive systems recorded by Frison and Benedict. The specific ways in which drives were used probably changed through time. It is likely that strategies for controlling the direction of game animals were altered as local conditions changed.

Anomalous Structures: The Pickett Creek platform structure (wall 3 / platform) and the Wood River and Jack Creek circular blinds are difficult to assign specific functions. Frison has labeled similar circular structures in the area as "Shaman Huts" (Frison 1991). However, other interpretations focus on identification of the functional purpose for these structures. For example, local informants call the Jack Creek structure an "Eagle Trap." The interpretations of these structures should remain flexible. Pickett Creek Wall 3 is unlike any other structure in the literature and any suggestions or ideas about its function are welcomed.

Generating Comparable Data Sets: Current information available for game drives and hunting structures are variable with respect to landscape and structural data points. One goal of this presentation is to suggest a standardization of recording procedures. Behavioral attributes may be inferred from comparisons of labor investments in construction of walls and blinds. Labor investments are quantifiable if dimensional attributes and construction materials are recorded in a standardized manner. A prototype Prehistoric Structure Data Collection Form accompanies this presentation.

References:

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