

Indications of Ephemeral Paleoindian Occupation in the Upper Greybull Watershed

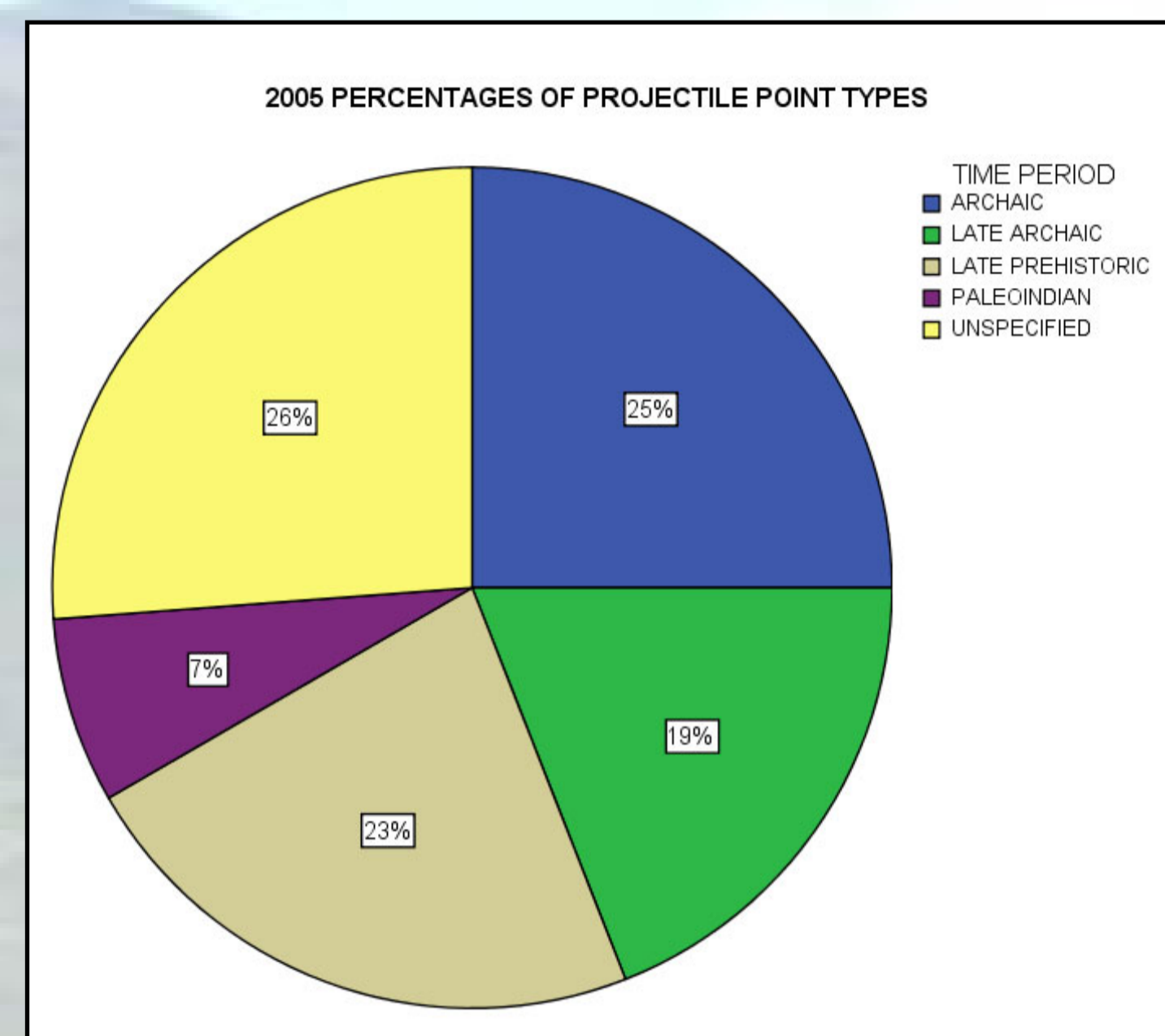
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Colorado State University's (CSU) Greybull River Sustainable Landscape Ecology (GRSLE) project has conducted four seasons of archaeological research in the Absaroka Mountains of northwest Wyoming. Despite the regional presence of well-known Paleoindian sites (Mummy Cave, Medicine Lodge Creek, Helen Lookingbill, Horner), surprisingly few artifacts associated with terminal Pleistocene-early Holocene occupations have been located in the upper Greybull project area. Three summers of field work near Dollar Mountain, Meadow Creek, and Venus Creek yielded just two Paleoindian projectile points, compared to five discovered in a single field season on Jack Creek and Franks Fork. The internal variation and seeming incongruity with established regional patterns demonstrates a need for further investigation of Paleoindian landuse in the upper Greybull watershed. To distinguish local contrasts in artifact distribution, topographic characteristics influencing human landuse, such as elevation, aspect, slope, view shed, and resource availability are evaluated using GIS software. The results, when put in a regional context, will contribute to the broader understanding of Paleoindian exploitation of montane environments, particularly in the upper Greybull drainage basin.

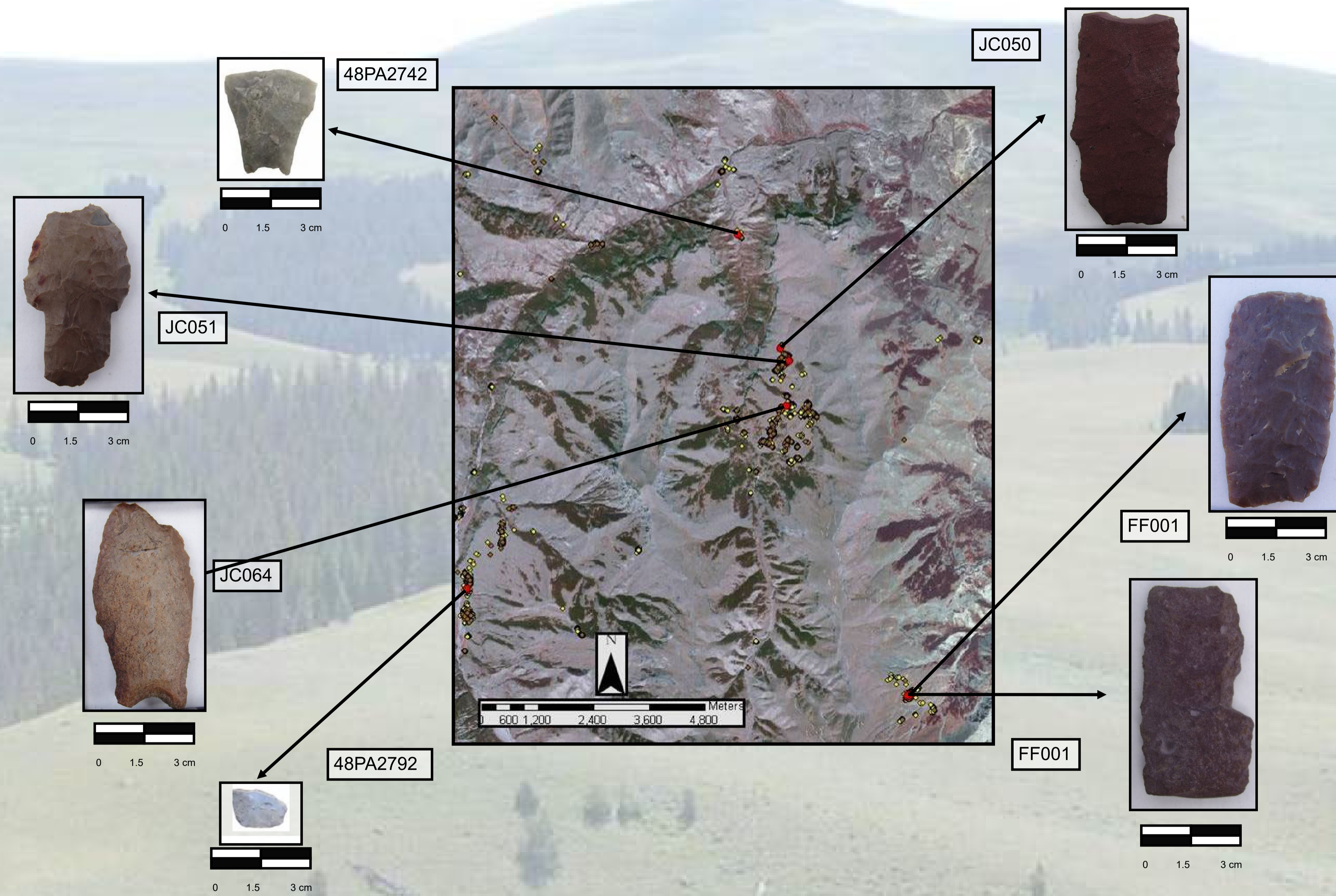
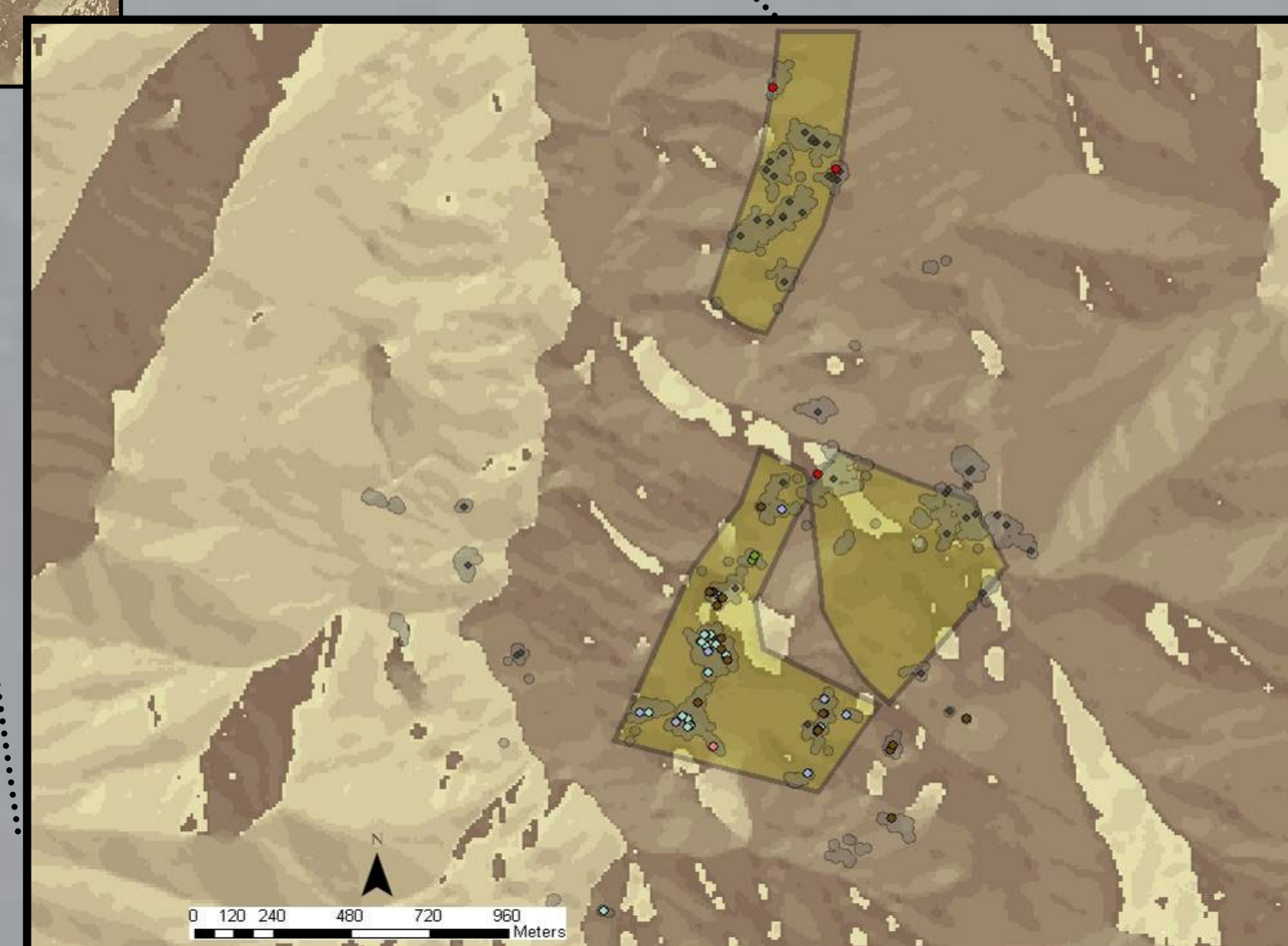
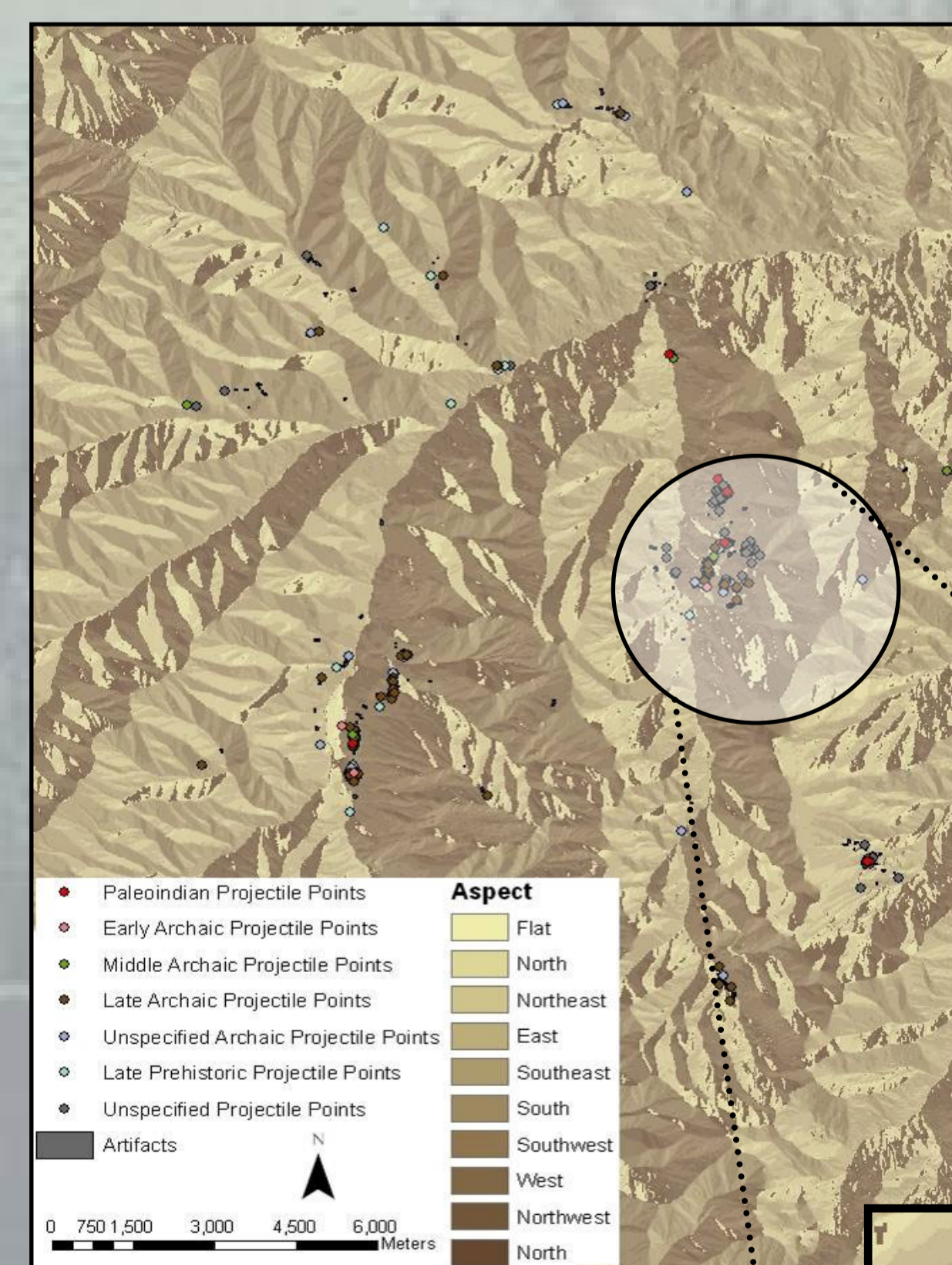
Projectile Points 2005



During the 2005 field season a total of 84 projectile points were recorded in the Jack Creek and Franks Fork drainages. Of the 84, five are associated with the Paleoindian period, 21 are diagnostic of the Archaic, 16 are Late Archaic, 19 are Late Prehistoric, and 22 are non-diagnostic.

Temporally Diagnostic Projectile Points, Artifacts, and Aspect

Aspect is a key factor in determining the presence and composition of vegetation. Typically south and west facing slopes have higher rates of evaporation. Greater effective moisture on north and east facing slopes often results in dense stands of vegetation that appeal to human and animal consumers (Frison 2004). Modeling aspect and site location for the 2005 GRSLE projectile area shows the majority of artifacts are on north and west facing slopes. With more data researchers hope to better understand prehistoric land-use patterns.

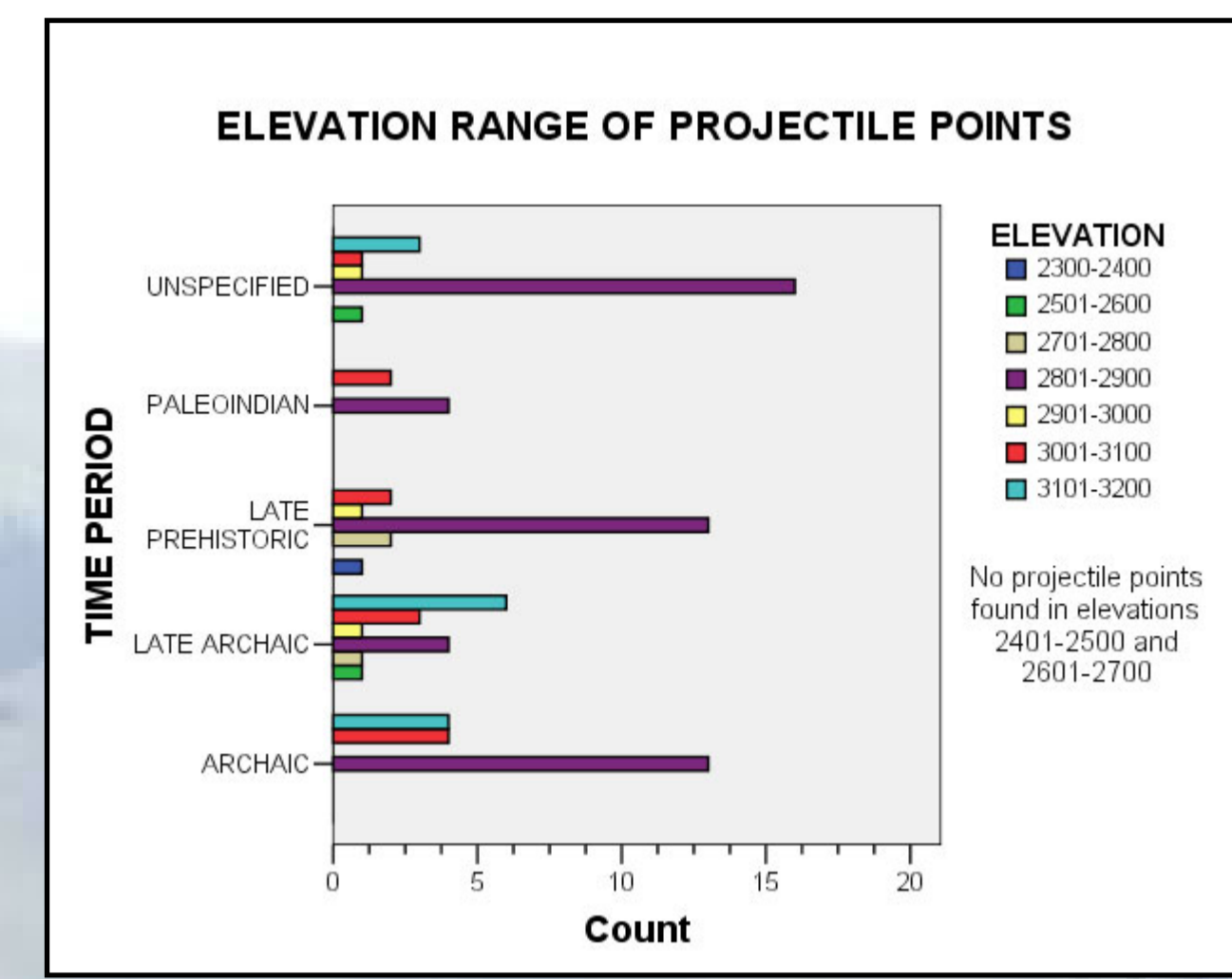


A significant number of Paleoindian sites are located in the vicinity of the GRSLE project area. Sites relevant to the Upper Greybull chronology (Burnett 2005) 1. Colby; 2. Hanson; 3. Horner; 4. Mummy Cave; 5. Medicine Lodge Creek; 6. Osprey Beach; 7. Lookingbill; 8. Bighorn Canyon Caves, including Bottleneck Cave, Mangus, and Sorenson; 9. Laddie Creek; 10. Southsider Cave; 11. Wedding of the Waters Cave; 12. Dead Indian Creek; 13. Daugherty Cave; 14. Pine Spring Cave; 15. Pagoda Creek; 16. Horse Creek; 17. Moss Creek; 18. Boulder Ridge.

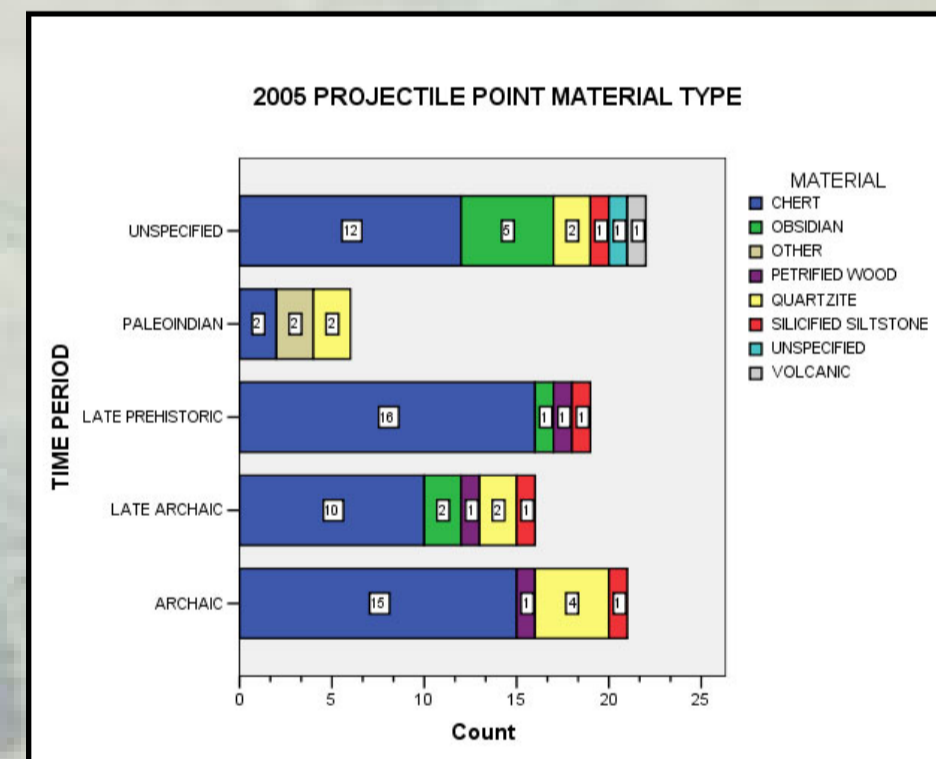
A Mountain-Foothill / Plains Dichotomy?

Between approximately 10,000 and 8,000 years ago Frison (1992) proposes groups in the open plains and foothill-mountain ecosystems are engaging in two unique subsistence strategies. Determining Paleoindian mobility patterns and resource use in the GRSLE project area is complicated by the palimpsest of artifacts that have accumulated over the past 10,000 years. While artifacts representative of both the Mountain-Foothills tradition and the Plains lifeway are present, the scarcity seems to indicate an ephemeral Paleoindian presence on the landscape. More archaeological research in the upper Greybull watershed is needed before a definitive evaluation of Paleoindian occupation can be stated.

| Foothill-Mountains | Open-Plains |
|---|---|
| Fewer diagnostic artifacts, non-Plains point styles, and less overall variability in site assemblages | Greater continuity in projectile point styles within the same time periods |
| Tool stone is dominated by locally available raw material | Exotic raw material, often from distant sources |
| An 'Archaic-like' hunting and gathering lifestyle, focus on mountain sheep, pronghorn, and mule deer; less on bison | Sophisticated methods of communal bison hunting, utilize natural land formations and construct retaining structures |
| Utilization of caves and rock shelters possibly for seeds, bulbs, and possibly dry meat | Evidence for caching of frozen meat during winter (Frison 1992:323-339) |



Elevation in the GRSLE project area ranges from 2300 to over 4000 meters. The majority of projectile points were found between elevations of 2800 and 2900 meters. While partially a function of survey area, additional data may clarify temporal variations in resource acquisition and help to identify patterns in land use.



A chart of projectile points plotted by material type displays a uniform distribution within the Paleoindian period; however the scarcity of data renders any behavioral inference speculative.

Temporally Diagnostic Projectile Points, Artifacts, and Degree Slope

