

Mary Hewitt
 hewitt333@msn.com
 Center for Mountain and Plains Archaeology
 Department of Anthropology, Colorado State University

Site Background

Benedict's Rock (5BL232) is located adjacent to the Indian Peaks Wilderness area near the town of Ward, in Boulder County, Colorado, on the eastern slope of the Southern Rocky Mountains. It sits at an elevation of approximately 8600 feet above sea level and is located in a mountainous montane environment. The South St. Vrain river runs through the property, flowing eastward out of the mountains. The site lies on the property of Audrey and the late James Benedict, who passed away in the spring of this year. They have graciously allowed the Colorado State Field School to work and camp at this site for the past two summers. Specifically, the assemblage is a lithic scatter around a large boulder, situated in a terraced river valley near the periphery of the up-sloping forest edge.

While most assemblages in the area represent palimpsests of temporal and spatial reoccupation, this location appears to represent a single component Late Paleoindian Scottsbluff site. It likely signifies a short-term occupation or stopping off point. The flake distribution data may indicate this, based on the scatter patterns surrounding the rock.



Photos by Alexis Knee



Map of Location in the Indian Peaks Wilderness, Colorado



The excavation site is located approximately in the lower mid picture. See red arrow. The river can be seen mid picture flowing laterally from west(left) to east (right).

Primary Methods and Goals of the 2010/2011 Field Camps

- Excavated 23 1x1 meter units in 50x50 cm quadrants to a depth of 5 cm per level, mapped and collected flakes, bone fragments, and charcoal for future C14 testing, dry screened each quadrant level, recorded the data, Munsell soil testing at each quadrant level, and drew soil profiles per each unit.

- Will look for patterns in the frequency distribution of flakes to try and determine if the scatter represents a single individual knapping episode.

- In addition, this site is important as it adds to the archaeological record of ephemeral type campsites that have low visibility and small lithic assemblages.



2011 CSU Field Excavation- 1x1 excavation units, looking towards the southeast

Data Analysis and Spatial Associations

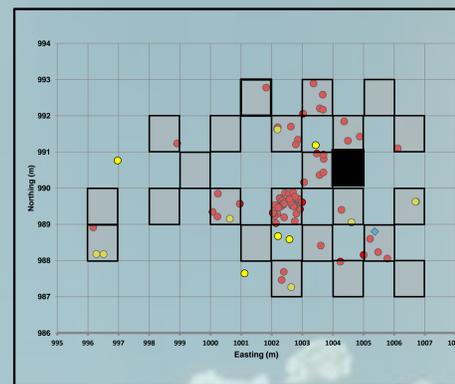


Fig.1: Plan map of all plotted items on site.

Red = sub-surface
 Yellow = surface (Benedict)
 Blue = Tool from 2011 (at right)

Most artifacts were below surface, close to the large boulder, trending in a southwesterly direction. The forest edge is just south of the boulder near the forest edge and slopes gently to the north towards the river.

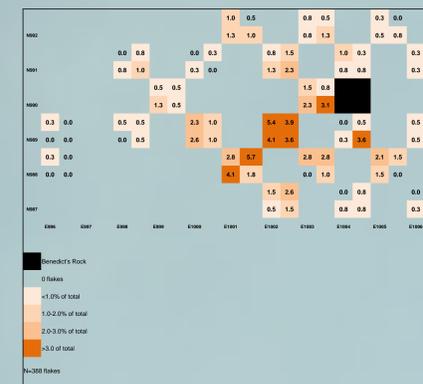


Fig.2: Flake percent by quadrant.

There is a strong density of scatter located close to the rock, just to the southwest, as if someone were sitting or standing there knapping.



Midsection of a Scottsbluff projectile point found in quadrant N988 E1005.

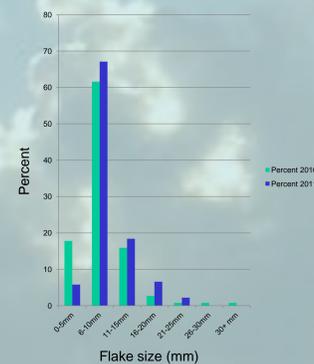


Fig. 3: Percent of flakes by size

The dominant trend here shows that most of the flakes are in the 6-10mm range, which is indicative of late stage reduction.

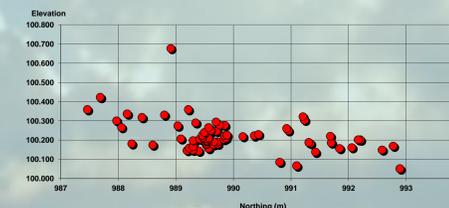


Fig.4: Back plot view from north cross section.

There is a clear trend showing a drop in elevation and the location of the most flakes. This follows the general topography of the landscape as it appears today.

Questions

Does the flake dispersal in any way represent a single individual knapping episode?
 -Are there specific indications as to size and density of flakes?

Is there a functional association between site structure and the amount /type of debitage on the site?
 -Does the location and type of material indicate something specific?

What environmental taphonomic factors may have impacted this site?
 - How might a valley location affect the presence of a site?



Only 2.0 % of the total number of flakes had any cortex. This would appear to be a late-stage reduction episode, dominated by resharpening, that occurred at the site.



50.8 % of the total number of flakes were burned. This may have been caused by a wildfire as there was no evidence of any hearth features on the site, and many burned twigs were found in the block units during excavations. This is not surprising as the site is located at the forest edge.



Bifacial thinning flakes and re-sharpening flakes seem to be the dominant types of debitage found in the distribution on the site.

Discussion and Conclusions

This site is unusual in that its only feature is the lithic scatter surrounding the rock. It's location is somewhat remote, lying in montane valley surrounded by mountainous terrain, but it is also found in a resource rich area. There is an abundant amount of game, both large and small in the area, diverse plant life and plenty of water. In addition, it is perfectly located in between the higher elevations and the plains, which would provide easy access to other types of diverse flora and fauna and allow for movement to those resources based on need and/or seasonality. The amount data that we collected is small when compared to other types of sites where there is a clear sense of what was going on, such as a hunting/kill camp or a typical subsistence camp where the assemblage is varied and deep.

The artifacts speak for themselves, as the majority are small petaloid type and bifacial thinning flakes that are ovoid to triangular to some having somewhat parallel sides. They have tiny platforms, some are slightly curved with bulbar ends. The largest concentration is found in the 5-10mm size range, with the next largest densities between 10-15mm and 5-10mm respectively. According to Wheat (1979) this suggests the final stages of manufacture of projectile points and stemmed knives. Another attribute, or lack of, is the extremely small percentage of flakes without cortex. There were only 8 specimens that had any at all. This would imply that the toolkit only included already manufactured tools and preforms needing final reduction, or resharpening was done on existing tools already made. Usually this was done by pressure flaking, as many of these pieces indicate.

The majority of material found was chert, with a few pieces of quartzite included. The density chart at left clearly shows the concentration to the west and slightly south, as if someone was resting beside the rock. Given the location and size of the scatter at the site, it appears to be a short-term occupation episode or possibly a game scouting site. That is not to say that the site was not used more than once. It seems to fall into Hoffman and Ingbar's (1988) category of a 'limited activity station'. Although they used that term in reference to game movement monitoring, I don't believe we can say for sure this is the case here, because as of yet, there is no other evidence of a camp or kill site nearby.

Also, erosional episodes surely occurred in this terraced valley, denuding an already shallow site further. Deflation around the rock and the slope towards the north probably exposed this site in the first place.

While the scatter and debitage does appear to indicate a single component site, it can't be said with certainty that it was a single episode due to environmental factors and lack of other material artifacts.

Further Research Directions

Additional research that could be undertaken is to locate similar types of sites and assemblages in the area to help narrow settlement/subsistence patterns, as well as to get at movement and environmental factors that drove such patterns. A closer look at the taphonomic processes that have taken place in the valley should also yield additional insights.

Acknowledgements

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