

Game Movements, TEK, and Archaeological Site Locations

By Lindsay Melsen



Introduction:

This study is an attempt to understand the land-use patterns over time of the people residing in and around the Greybull watershed. The study's design came about while researching the place names of many of the landmarks in and near the study area. In researching the landscape, there were many informal conversations with the local land stewards in regards to their history in the area and their relationship with the land. This led to the interest in how prehistoric cultures related to the same land. One way to study the possibilities of past land use is by researching land-use patterns throughout the different stages of occupation to see if there are any correlations between groups. Currently, the occupants are farmers, ranchers, and hunters, who live intimately with the land. They may hold valuable information in understanding the land-use patterns over time.

•Can archaeology benefit from the TEK of local land stewards?



Jack Creek Trailhead: This trailhead serves as one of the high population density modern-day hunting camps and as a recreational campground. It also has a very nice site on it!



An example of Traditional Ecological Knowledge (TEK) being passed from one generation to another. Frison makes reference to this in his most recent book, *Survival By Hunting* (2004).

Ethnoarchaeology / Archaeology
 •Spans all variables of change
 •Different types of information from each

VARIABLES
Fast (yearly)
 •Recreation
 •Hunting
 •Ranching
 •Current land-use patterns

Medium
 •Traditional Ecological Knowledge (TEK)
 •Historic documents
 •Cultural Geography
 •Historic land-use patterns

Slow/Long Term
 •Land use over time
 •Prehistory
 •Landscape Changes
 •Prehistoric land-use patterns

Application / Methodology
 •Resource Management
 •Include cultural studies
 •Build Social capital
 •Protect archaeological record

Knowledge
 •Land-use patterns over time
 •How culture affects land use
 •Interaction of people with landscape
 •Archaeological interpretation

Theory
 •Interpretation based on land-use patterns
 •Multi-disciplinary approach
 •Link non-human variables to human behavior



Figure 2. This figure shows the relationship of time variables in Archaeology. On the left side of the drawing, there is a box labeled "Ethnoarchaeology / Archaeology." This box represents that ethnoarchaeology and archaeology span over three time variables, fast, medium, and slow. Fast variables can be seen on about a yearly basis, medium variables can be measured over approximately a lifetime, and long variables are seen along the entire archaeological record. If the ultimate goal of archaeology is to understand how people live in an area, it is necessary to understand the interaction between the landscape and the people, or how they affect each other. Landscape-use patterns are a direct corollary of the landscape itself. In order to get the *fullest* picture of land-use patterns over time, it is necessary to understand all the variables of change (Fast, Medium, Slow) in a system. Researchers can measure the fast and medium variables now as a way to understand the land-use patterns of the present. The slow variables are harder to understand because they are not under direct observation. They must be interpreted with the help of understanding the other variables.

Conclusions:

- Employing the use of Traditional Ecological Knowledge of local land occupants is useful and practical because:
 - The ecological knowledge of the area is helpful in finding sites and understanding game movement patterns.
 - The local land stewards can help researchers by sharing their knowledge of the landscape throughout the entire year. This is helpful because researchers may not be in the area long enough to know seasonal variation of the area.
 - It creates Social Capital by creating good relations between researchers and the people who live in the research area as well as good relations with the researchers from other disciplines. Getting out into the (Scheffer et. al. 2003: 237). This approach can be put to use in many other fields of study as well; it is not limited to archaeology.
 - This approach allows for more informed recording because it accounts for the way a people lived on a land by finding some possible "whys" and "hows" through ethnoarchaeology.
 - A useful way to integrate this approach is by using cultural anthropological methods to interact with local land stewards to expose their Traditional Ecological Knowledge.
 - The traditional knowledge can also be functional in implementing multi-disciplinary approach in resource management.

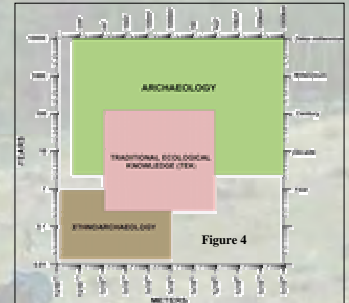


Figure 4. This figure shows the overlap of archaeology, Traditional Ecological Knowledge (TEK), and ethnoarchaeology. It shows the logarithmic relationship (in order to account for the large numbers) between meters on the x-axis and years on the y-axis. Because ethnoarchaeology and TEK can be measured in up to about 100 years, they can be seen in the top layers of the archaeological record. Ethnoarchaeology can be confirmed via the actual archaeological record.

References:

Scheffer, Marten, Frances Westley, William A. Brock, and Milena Holmgren. 2003. "Dynamic Interactions of Societies and Ecosystems - Linking Theories from Ecology, Economy, and Society" In *Panarchy*, edited by Lance H. Gunderson and C.S. Holling. Island Press, Washington.

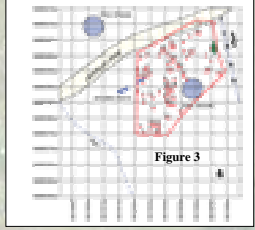
Frison, George C. 2004. *Survival by Hunting: Prehistoric Human Predators and Animal Prey*. University of California Press, Berkeley.

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Figure 3. This is an example of one site where there are both historic and prehistoric information. This is modern recreational area as well and is used as one of the main hunting camps in the river drainage. The lithic scatter is shown in the picture via the small red triangles and the recreational camp items are labeled.

It is reasonable to be concerned about the integrity of the prehistoric site because of the potential of damage due to modern human use.



Close-up of horse hitching posts



The horse hitching posts are literally right on top of this lithic scatter.



Close-up of a feed trough. There is one large feed trough within the site boundary and one more just adjacent to the site.



This is a historic photo of a successful hunting party on their way home. Horses are many times used to get the meat from the kill site to the storage site in modern-day hunting.



Bear poles are evidence of modern camps. The use of bear poles has increasingly become popular in the last ten years.

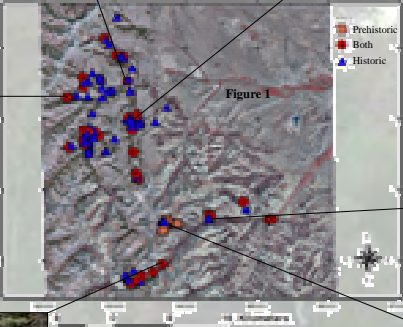


Figure 1. Map of the Greybull Watershed. Sites shown are Prehistoric, Historic and Both. This map shows the overlap of Historic and Prehistoric sites, confirming that humans of all cultures and time periods are attracted to somewhat of the same land use patterns in a given area. This is especially true in mountain or high elevation systems because of the difficulty in terrain and weather conditions, where people are attracted to. Many of our sites were found as a result of building social capital with the area's citizens. Many people either told us where they had seen artifacts or where the popular modern-day hunting camps were. We surveyed some of the modern-day hunting camps as a result and found more prehistoric sites.



Anderson Lodge: Built by A. A. Anderson on Anderson Creek. This picture shows the rewards of a successful hunt.



This site marks the end of the dirt road that runs along the Wood River. It was home to a historic mining town and now is a popular recreational area. The modern bear panner can be seen in the background.

Partaking in participant observation and building social capital. The GRSLE 2004 field crew assisted in a cattle-branding in which 350 calves were branded and vaccinated. This was a great opportunity to meet the main informants



