

Game Trails and Site Locations: Is there a connection?

Introduction:

Game trails run across the landscape, and the locations of the game trails probably have not varied too greatly over time due to the limitations of travel corridors that would have been easy for the animals to traverse. The animals that make these trails have been used as food for the people living here for thousands of years, and the hunters of these animals would have used the trails to hunt, and possibly would have lived near them as well. This led to the idea that if people settled near areas with game trails, it would be easy to find new sites by following the game trails. In the area of Northwestern Wyoming that this project was done in, there are

both white tailed and mule deer (*Odocoileus virginianus*, *Odocoileus hemionus*), elk (*Cervus elaphus*), moose



Figure 1: Deer on trail marked during transect 2

(*Alces alces*), and pronghorn antelope (*Antilocapra americana*). Herds of these animals can contain several hundred individuals during some seasons when they congregate. Big horn sheep (*Ovis canadensis*) are also seen, but generally are found in higher elevations.

Methods

To find a correlation between game trails and site locations, this experiment was designed to run East to West transects starting from a high ridge and surveying to a creek at the west end of the area. Each transect was 500 meters apart, and an average of 30 game trails were marked on each of the six transects walked. The game trails crossed by each transect were waypointed using a Garmin Rino110 and the orientation was recorded with a Brunton.

Figure 2: Game trail seen through snow near site JC 013



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Prehistoric use of the mountains included big game hunting. A number of factors such as predator density, forest cover, snow depth, etc influence game movement patterns and hence human hunting strategies. While these have varied considerably, and cannot be taken as being of direct relevance to understanding prehistoric game movements, another factor-local topography provides a nearly constant influence of game movements. This project explores contemporary game trails' proximity to archaeological sites in order to better understand game movement patterns in relation to local topography. This was accomplished by sampling the landscape around sites using a series of east to west transects. These transects were positioned to encounter areas of high topographical diversity defined by high ridges to the west and a creek at the east end of an area previously surveyed for archaeological sites. Each game trail intersected by a transect was waypointed with GPS, as well as recording the orientation of travel. After walking several of these transects, it was seen that game trails are most frequently found on difficult terrain such as steep hillsides or along waterways, while the flat open areas where archaeological sites are found generally do not contain game trails.



Figure 3: Multiple game trails on hillside, transect 3

Results

After walking several transects, it has been seen that game trails generally occur on more difficult terrain such as steep hillsides, along the creek banks, or at the edge of the cliffs that were located in one section of the survey. There were also many game trails in the forests, but due to the limitations of the GPS system, waypoints in the forests aren't recorded accurately. The sites in our survey area were found on level ground, and often had commanding views of the surrounding land. There are fewer game trails on the flat, open land because there is a much wider area that provides easy travel and the animals can spread out. On steeper areas, all of the animals in the herd will follow the path of least resistance, every time. This increases the impact they have on the land. This is also true in the forests where trees limit the animals to a few easily traveled paths. It is also possible that on flat ground all the animals of the herd can locate one another easily, but difficult areas of terrain can hide predators as well as members of the herd, so it safer to group together.



Figure 4: Well worn game trail, located near FF 001



Figure 5: Researcher recording a game trail during transect 3

Conclusions and Future Research

Finding game trails did not help us find new sites, but can inform current researchers to ways that animals, and the people who hunted them, moved across the landscape. Future research could include more transects to mark game trails to find travel corridors, and to help locate areas that are more favorable to possible site locations by eliminating areas that have high concentrations of game trails. Future research could also involve the SwitchBack program being developed by Courtney Hurst of CSU to see if the travel corridors picked out by the program as the least cost route are the same path taken by animals.

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Figure 6: Game trail at beginning of transect 6

