High Elevation Geoarchaeology: Alpine Landscapes and Human Use, Dollar Mountain, a Northwestern Wyoming Example

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I) Introduction:

During the summer of 2003 a high altitude survey was conducted in Dollar Mountain Cirque to determine the extent of prehistoric use and occupation of the area. The field work was conducted as part of the Greybull River Impact Zone (GRIZ) project and focused on the basin of the Wood River, a tributary of the Greybull River in the Absaroka Mountains of Northwestern Wyoming. While prehistoric survey results were limited, there were no published accounts of geochronology, landscape ecology, or other studies of the region. The research was initially focused on palynology and geochronology, especially due to glacial activity. The survey included the creation of geologic reference materials, extensive glacial and periglacial deposits. The environment reflected a geologically active alpine range. The dynamic geologic activity created an unusual environment to document mobility and raw material use in this little studied region. Archaeological data such as this have the potential to contribute to local scale studies of the region, something of which the team has little experience. All work conducted on Dollar Mountain has been published in a variety of sources.

II) Geologic Setting:

The Dollar Mountain Survey was conducted by taking a high altitude survey of the Dollar Mountain cirque and the adjacent Dollar Flats. The survey was conducted at Dollar Mountain and Dunrud Peak, where elevated watersheds are found. The purpose of this archaeological survey was to determine if there was any indication of prehistoric use of the area. The survey was conducted in the basin of the Wood River, a tributary of the Greybull River in the Absaroka Mountains. The survey was conducted by Dr. Thomas Reitze and Dr. Lawrence Todd. The survey was conducted by taking a high altitude survey of the Dollar Mountain cirque and the adjacent Dollar Flats. The survey was conducted at Dollar Mountain and Dunrud Peak, where elevated watersheds are found. The purpose of this archaeological survey was to determine if there was any indication of prehistoric use of the area. The survey was conducted in the basin of the Wood River, a tributary of the Greybull River in the Absaroka Mountains.

III) Environment:

The elevation of the study area ranges from 2920 meters at the base camp to 3450 meters at highest surveyed moraine. The survey was conducted with a 2 meter interval until artifact concentrations were located. These were then resurveyed at 70 cm intervals. The provenience of the artifacts found one of these sites, DM001, was additionally recorded with a Sokia total station. The provenience of the artifacts found one of these sites, DM001, was additionally recorded with a Sokia total station.

IV) Methods:

Several methods were employed during the field season. Production survey was conducted across a large portion of the Dollar Mountain cirque and adjacent Dollar Flats. A total of 17 sites were recorded, these were then resurveyed at 70 cm intervals. The provenience of the artifacts found one of these sites, DM001, was additionally recorded with a Sokia total station. The provenience of the artifacts found one of these sites, DM001, was additionally recorded with a Sokia total station.

V) Results:

The results of the survey were used to create a rough temporal chronology of sites with datable material or diagnostic artifacts. Preliminary analysis of the archaeological assemblage at Dollar Mountain is summarized in Table 1. Of the seventeen sites, the majority contained a matrix of diagnostic artifacts, including a large number of flaked stone tools. These artifacts included a variety of projectile points, including a few that were diagnostic for Early Archaic. Additionally, a variety of small tools were documented. The raw materials used in the production of these tools were primarily chert, with a few exceptions of quartz. These artifacts were documented at a variety of sites, including sites on Dollar Mountain, adjacent Dollar Flats, and in the basin of the Wood River.

VI) Glacial Action:

The topographic setting of the cirque, the river valley, and the high altitude cirque all have an important role in the preservation of late Pleistocene and Holocene deposits. The cirque is a unique geological isolate in a sea of volcanic rock. Dollar Mountain is capped by a large snowfield that in the past has been used for skiing. The cirque is a unique geological isolate in a sea of volcanic rock.

VII) Dollar Mountain Chart:

Dollar Mountain contains an enigmatic source of Paleoindian age components. The deposits in the cirque range from 12,000 years ago to the present. The deposits in the cirque range from 12,000 years ago to the present. The deposits in the cirque range from 12,000 years ago to the present. The deposits in the cirque range from 12,000 years ago to the present.

VIII) Acknowledgments:

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