GREYBULL RIVER ARCHAEOLOGY 2002-2004

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GREYWULL RIVER ARCHAEOLOGY 2002-2004
Research along the Greybull River Drainage in NW Wyoming

Goals:
• provide baseline data for monitoring landscape change
• begin to document the archaeological record of past landuse
• document contemporary landuse
• promote stewardship
• explore sustainable alternative futures

….and to work in the best county on earth!!

Survey
In-field analysis, non-collection
Research Questions:

- How much were the mountains used in the past?
- Did use of the mountains change over time?
- Were different parts of the Greybull Drainage used differently?
- Did prehistoric use of the mountains and the Big Horn Basin differ – and/or how was it similar?
- Can local knowledge of the area be used to help understand the past?
- What risks are threatening this unique archaeology?

Intensity of use?
So far nearly 25,000 artifacts recorded
Up to 56 observations recorded on each item
Nearly 150 new archaeological sites
Ages from only about 200 years to about 8,000

Big Horn Basin
> 600 square miles
- BLM
- National Forest
- GRSLE 2002-2004
- 88 on National Forest
- 60 on Washakie Wilderness

Before our work started in 2002, the central Absaroka mountains were a large Blank Spot on the map of Prehistoric North America.
Teasing apart multiple uses:

How much were the mountains used in the past?

There seems to have been a very heavy and long-term use of the mountains – the archaeology found in Meeteetse’s high country is a diverse and as rich as that found almost anywhere in North America. In addition, it has suffered limited vandalism or looting – it is an exceptional record of international significance.
Changing use?

• Find more occupations and points that date to between 2000-3000 years old.

• Before 2000 years ago, common to find camp sites at a wide range of elevations.

• After 2000 years ago, camp sites tend to be at lower elevations.
Earliest periods (Paleoindian) rare, and most common at lower elevations (8100 ft or lower)

- Highest average elevation of use from 7000 and 3000 years ago (average = 9800 ft)
- Last 3000 years use varies, but average below 9000 ft.

For the last 7000 years, there is a trend toward using smaller tools and this is reflected in the flaking debris left from tool manufacture.
After 2000 years ago (Late Prehistoric), obsidian use increases. This may indicate differences in movement patterns or changes in trade and exchange networks.

One of our students is doing her Master’s thesis on tracking the sources of obsidian found along the Greybull … stay tuned.

Did use of the mountain change over time?

Yes. For the last 10,000 years there have been changes in the way people used the mountain landscapes. We are only beginning to scratch the surface in describing these differences, and a long way from explaining them.

One of our students is currently completing his Master’s thesis on changing uses of the mountains. We should have a copy in the library by next summer.
Differences in use?

We now have very preliminary information to look at difference between several 1st to 3rd order drainage basins.

Where did prehistoric peoples get the stone to make their tools?

Do these sources differ between drainage basins?

This is a project begun by one of my new graduate students.
Drainages differ in the raw materials commonly used for Stone tool manufacture.

But there is also a lot of variation within a single drainage. For example sites ranging from the head to mouth of Jack Creek are very different.
Difference between mountains and basin?
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Distribution of flake lengths from the Bighorn Basin (n = 131) and Absaroka Mountains (n = 17,745), including flake fragments.

\[ \bar{x} = 36 \text{ mm} \]

\[ \bar{x} = 13 \text{ mm} \]

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% OF FLAKED STONE SAMPLE

<table>
<thead>
<tr>
<th>Material</th>
<th>Bighorn Basin, n = 182</th>
<th>Absaroka Mountains, n = 21,993</th>
</tr>
</thead>
<tbody>
<tr>
<td>Absaroka Toolstone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chert</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Obsidian</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quartzite</td>
<td></td>
<td></td>
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<tr>
<td>Morrison Quartzite</td>
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<td></td>
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</tbody>
</table>

Includes Basalt, Chalcedony, Dollar Mountain cherts and quartzites, Irish Rock Chert, Metamorphic Slate, and Winkler Peak Shale Agate and Untagged Gravelly Agate.
How did prehistoric use of the mountains and the Big Horn Basin differ – how was it similar?

The difference is “night and day.” What do these differences mean?

• different seasons?
• different peoples?

As yet, we have not done nearly enough work in either the interior Basin or the foothills. Too much ignorance......

Local Knowledge?
Looking at Community

Before 1950:
112 men
Average life expectancy 49.0
58 women
Average life expectancy 35.4

After 1950:
226 men
Average life expectancy 65.7
160 women
Average life expectancy 69.9
Can local knowledge of the area be used to help understand the past?

Yes. For over a century, accumulation of local knowledge about changes in weather, grazing, game movements, etc. has developed an unrivaled source of information about human landuse.

We hope to be spending more time talking to, and learning from you in upcoming seasons. Recording this “Traditional Ecological Knowledge” (TEK) is essential. As most of use know, however, more of this is being lost each year.
Threats?

A recent example of multiple threats

Before...

and after

Photos of wildlands fire impact courtesy of Chris Finley
Fires can destroy some items, but can sometimes lead to the discovery of truly amazing archaeological materials.

Unfortunately, the archaeology so exposed is also very visible, very fragile, and very susceptible to damage.
What risks are threatening this unique, irreplaceable archaeology?

There are many, but perhaps the most severe is more people. Our goal in learning about the archaeology is to help preserve both the information and the Library that contains it for the future.

But as we learn more, our fear that it will be damaged and/or lost increases.

The BIG question that we don’t have any clue to the answer:

How to limit or reduce the loss?

This is where we really need to tap into local expertise, what are your suggestions?
Thank you!
Please feel free to ask questions or give comments.

If you’d like more information on the results of our investigations, please visit:

www.greybull.org