Archaeological Analysis of Bison Remains from Wilde Cave, Idaho
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1. Introduction

Wilde Cave is a lava tube located in Southeast Idaho. Recent investigations recovered at least 208 pieces of butchered bison bone, representing at least nine bison. Interestingly, the vast majority of these specimens represent portions of the fore and hind limbs. We also note that based on surface preservation it appears there are multiple butchering events represented in the collection. Given these observations, this research project targets better understanding the patterns in the archaeological bison bone from Wilde Cave.

2. Data Collection

In October 2017, four undergraduates under the supervision of Dr. David Byers visited and recovered Wilde Cave’s bison assemblage. A laser transit was used to collect spatial information for every specimen. Over 300 points were collected, these are shown in map below, bison specimens are identified by a blue point.

3. Bison Skeletal Part Profiles

%MAU is a zooarchaeological measure of element frequency (Lyman 1994). Above are the results of the faunal identification process. As shown above, leg elements—particularly hind leg—represent the bulk of the collection. For example, the minimum number of animals, nine, was generated from left patella. More over the two second most common skeletal parts come from the proximal femora and astragalus, both portions of the hind limb (Fig. 9 - 11).

4. Density Mediated Attrition

Density mediated attrition helps measure the survivorship of bones contained in the collection, by understanding what is present we can better understand what has been lost through carnivore ravaging or other natural processes that tend to delete information (Lyman 1984). To further understand the natural or man made factors that constructed this collection we compare %MAU with bone densities (Fig. 12). A very weak and negative relationship between the two measures suggests density mediated attrition due to carnivore modification, although present, has not meaningfully conditioned the survivorship of fauna in Wilde Cave.

5. Food Utility Indices

Zooarchaeologists often find meaning of carcass use through food utility indices. Food utility indices rank the economic utility of different carcass parts from highest to lowest yield. These theoretical tools then offer archaeologists a window into the decisions past peoples made when hunting, transporting, and butchering their prey (Lyman 1992).

6. Conclusions

Remains from at least 9 bison were located in Wilde Cave. The most prominent carcass parts represent upper hind limbs, while vertebrae and ribs were least common. There was limited evidence of butchery—burning and cut marks—and carnivore modification on the skeletal collection. However, based on the density plot, carnivore modification does not appear to have dramatically altered the representation of skeletal parts in the collection. Instead, bison hind limb portions appear to have been transported in Wilde Cave largely based on their fat content. Even so, much ambiguity still surrounds the collection. Some remaining uncertainty concerns the lack of shaft fragments and the variety of weathering stages included in the skeletal collection.

7. Acknowledgements

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8. References Cited

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