



# *Over The Edge*

## **Vore Buffalo Jump Foundation Newsletter**

**Volume XXXII, Number 3**

**P.O. Box 369**

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**Sundance, Wyoming 82729**

## **Update on the state of the Foundation**

### **Education Remains A Priority**

When the Vore family donated the land that includes the sinkhole bison trap to the Vore Buffalo Jump Foundation, their desire was that the site become a world-class research and education center. We may not be world class yet, but the Vore Site is definitely an educational center that is important to the region. During 2023, about 800 students participated in our field trip program. Students are accompanied by teachers, parents, and grandparents so this program also introduces that Vore Site to many adults. This year, we hosted 4th graders from Wyoming, including students from Gillette, Casper, Kaycee, Casper, Moorcroft, Sundance, Rozet, Sheridan, and Hulett, and from Union Center and Deadwood in South Dakota. The field trips would not be able possible without the volunteers who man the stations. Board members Adrienne Keller, Ted Vore, Curt Wiseman, and Lynnette Wermager; volunteers Dave Osborne, Pete Davis, Donnie Holt, Betty Haiar, Roy Bush, Hannah Ista, Josie Pearson, Marcy Havner, Cindy Waller, and Corrie Burgess; and summer staff Jacquie Holt, Becky Holt, and Michael York helped with spring and/or fall field trip this year. Many of the teachers who bring their classes first started coming to the Site about 10 years ago. This newsletter, we are pleased to share with you thoughts on the Vore Site from the Hulett 4th graders taught by Anna Baken.

### **Resources For Research**

Scholars from around the world will benefit from the efforts by Vore Scholars and the University of Wyoming Archaeological Repository (UWAR) staff to curate the artifacts removed from the Vore Site, which have been funded over the past three years by a grant from the Institute of Museum and Library Services. I am thrilled to report that efforts are on track to complete curation and proper storage of all high and medium priority artifacts excavated from the Vore Site since the 1970s. A website to provide digital access to the collection, run through the UW Library, is now available to the public. It includes high-resolution photos and information on 19,566 artifacts, 3D scans of each bison skull and canid skull, and links to field notes and publications associated with the Vore Site. You can access this information through the Wyoming Library website at <https://wyodigital.uwyo.edu/handle/20.500.14267/2775>. We would like to acknowledge Molly Herron who has been instrumental in this project. Molly began working with the Vore collection when she was a graduate student as a Vore Scholar. She is now the Collections Manager at the UWAR and, in addition to her work with the curation project, is responsible for posts to the Vore Buffalo (**Continued on next page**)



Jump Facebook page that describe interesting finds within the Vore collection (<https://www.facebook.com/VoreBuffaloJump>).

### Vore Scholars

The Vore Scholars program is in its fifth year. Donations to the VBJF have funded stipends for two undergraduates or graduate students every semester. Our intention is to continue the Vore Scholars program. Scholars will continue to assist with curation and will also be encouraged to participate in research. We will also fund a graduate student researcher beginning in the summer of 2024, who will work on a focused project related to the Vore Collection. Projects discussed with Spencer Pelton, the Wyoming State Archaeologist, who will supervise the student, include analysis of the number of bison killed in individual hunts at the Vore site, genetic analyses of the canid remains, and reanalysis of the projectile points.

### Good News

We reported good financial news at the annual meeting of the VBJF membership in October. This fall was the first annual meeting in 10 years when there was no discussion (and agonizing) over the loan that we had taken out to fund construction of our tipi. That loan was paid off at the beginning of the year. Our focus is happily shifted toward funding of research on the Vore collection and exhibit development.

The summer season was a good one. For the first time ever, we took in enough in admissions to pay the salaries of our summer staff. We had 4714 paid visitors this summer, up about 26% over 2022! We track both the number of people who pay for a tour and also the number who stop in but don't take a tour. This summer 73% of those who stopped at the site took a tour, whereas last summer only 61% did. We'll give credit to our excellent interpretive staff: Jennifer Adams, Jacquie Holt, Katy Anderson, Michael York, Chris Taggart, Heidi Stefanich, Briska Johnson, and Becky Holt.

I'll end with thanks to all of you who support the VBJF financially and with your valuable time and with a request that you renew your membership. This year those who renew or donate will be entered into a drawing for a print of a Dave Pauley painting of the Vore Site sinkhole. Thank you for your support of our mission to preserve and share an important piece of the past! ~ Jackie Wyatt—VBJF Board President

## “Rebraining” The Tipi

In 2014, Cheyenne women associated with Chief Dull Knife College in Montana constructed a bison hide tipi that is displayed at the Vore Site. The project was directed by Larry Belitz, an expert on the hide tipis of the Plains hunters. This winter, Larry will “re-brain” the Vore tipi to ensure that it remains supple. He will also repair several holes gnawed in the hide by rodents.



### The Original Tanning Crew

Left to right: Tee Jay Littlewolf, Lori Killsontop, Larie Clown, Rebekah Threefingers, Maria Russell, Jodi Waters and kneeling is Victoria Haugen.

At one of the stations of our field trips, we discuss with the students how the Plains hunters used various parts of the bison. This station relies on a matching puzzle created by students at Black Hills State University as well as some examples of modern items and their equivalents made from parts of the bison. For example, we have a bison bladder (the nomadic Plains tribes use the parts of the bison that held liquid to carry water), sinew (which was used as thread), and horn sheaths (which were carved into spoons and used to carry coals). To enhance this station, we plan to purchase additional buffalo products from Mr. Belitz including a tongue. Buffalo tongue was an eating delicacy and the dried tongue was used by Native Americans as a hair brush.



# Medicine Wheels – Connections to the Cosmos

By Gene Gade

The gusting wind was bitterly cold before sunrise on the exposed ridge high in the Bighorn Mountains. There were still snow drifts in the lee of rocks and the scattered, stunted and twisted trees and shrubs, lucky to have found a precarious anchorage and just enough soil and water in a crack on the weathered limestone. The holy person pulled a heavy buffalo robe tighter around his head and shoulders, otherwise ignoring the icy breeze at his back. The shaman had spent at least four days in the area, possibly accompanied by several other seekers or assistants. They probably made careful observations on the rising and movements of several bright stars. Almost certainly, they cleansed their minds and bodies with fasting, rituals, prayer and long periods in a sweat lodge. They were not hunting. Theirs was a spiritual quest, seeking vision, wisdom and harmony with the Great Mystery.

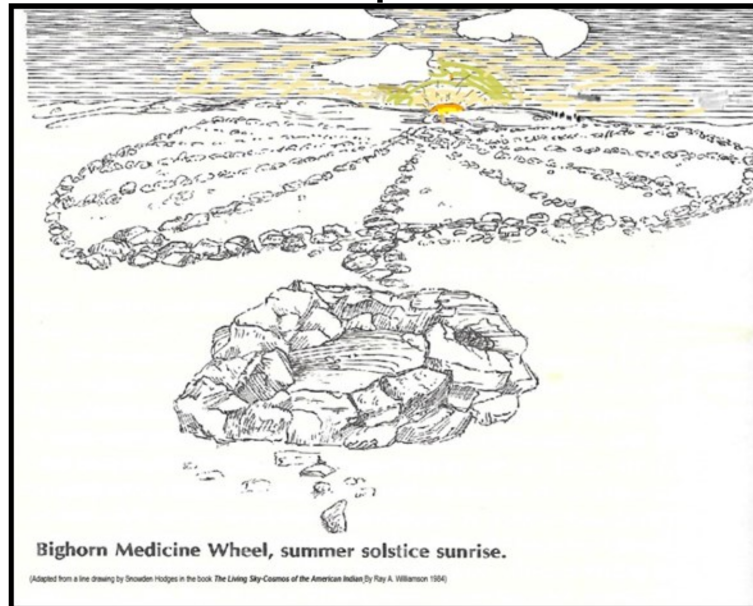
In the chilling pre-dawn darkness, the elders positioned themselves outside a large ring of stones. Likely they sang softly or prayed as they waited. In the center of the large ring was a smaller stone circle. The two concentric circles were connected by 28 lines of rocks, that radiate from the center like spokes of a wheel. Probably the radiating lines represent the 28 days of a lunar month. Six much smaller stone circles were carefully positioned along the outside rim of the main ring.

It is thought that observers stood at a small perimeter circle on the west side of the large circle, using it as a rear sight. From there they looked across the central circle, using it as a forward sight. Some archaeologists think that the center ring or cairn once supported a pole, similar to those used in a Sun Dance, that could also have acted as a forward sight. The alignment of the two circles pointed straight at the brightest point of the increasingly intense glow on the eastern horizon. Surely, they watched in awe as the sacred sun slowly emerged, just where the alignment pointed, on the summer solstice...the longest day of the year.

The ceremonial acts depicted above are conjectured, but the physical features of the scene are not. The site is called the Bighorn Medicine Wheel, and it was almost certainly used to make astronomical observations and predictions of the summer solstice. There is no doubt the completion of

the Wheel required considerable effort and careful observations that likely occurred in phases over a period of years. The diameter of the Wheel itself is about 82 feet. The central stone circle/cairn is about 10 feet wide. The site is almost 10,000 feet above sea level, and it has a nearly unobstructed view, especially of the eastern horizon.

## An Astronomer's Hunch Pays Off



There are still many mysteries about the Medicine Wheel. Who assembled it? When? The questions of why it was built and how it was probably used were partly resolved in June of 1972. A solar astronomer named John Eddy took time from his research on sunspots and the solar corona to investigate the Wheel. Eddy traveled to the Bighorns with his daughter, a surveying

transit, cameras and few other instruments. They spent several days at the remote Medicine Wheel site, enduring cold winds and a storm that dropped a foot of snow on them, observing and recording much data on the movements of the sun and several prominent stars (Aldebaron, Rigel and Sirius). On June 21<sup>st</sup>, the summer solstice, Eddy was positioned and had sighted his transit and camera across the Medicine Wheel cairns to record the sunrise. **(Continued on next page)**

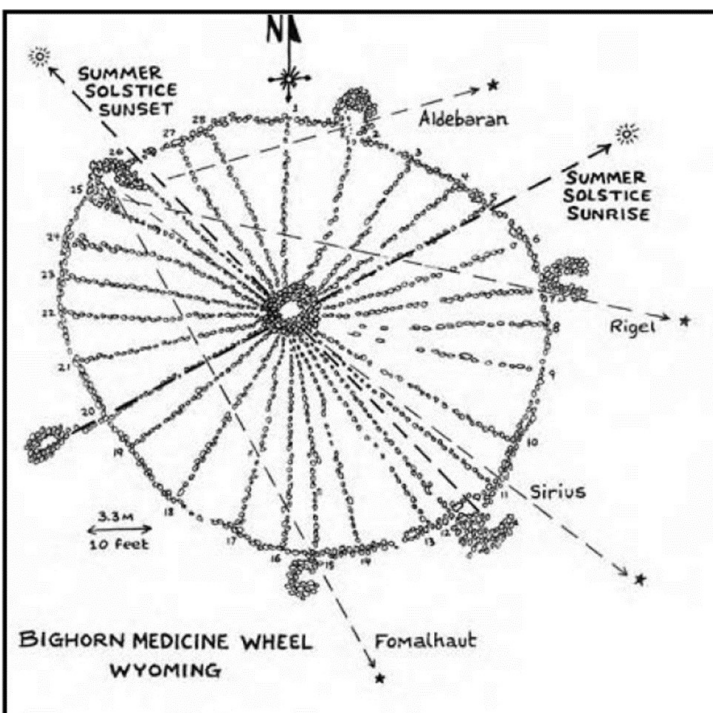


Eddy published his conclusion that the Medicine Wheel was used to determine the exact day and locations of the sunrise and sunset on the solstice. He also suggested that Native Americans used the risings of the three bright stars to predict and prepare for the solstice. Eddy's findings were at first criticized, both by his astronomer colleagues and by some anthropologists, but with time and further documentation, they are generally accepted. Essentially the Medicine Wheel may have provided a calendar date to cue the start of the Sundance the rest of the annual ceremonial cycle. The people of the Plains tribes revered the sun and developed important ceremonies to celebrate it. This knowledge of "sacred forces" would have been deemed very powerful.

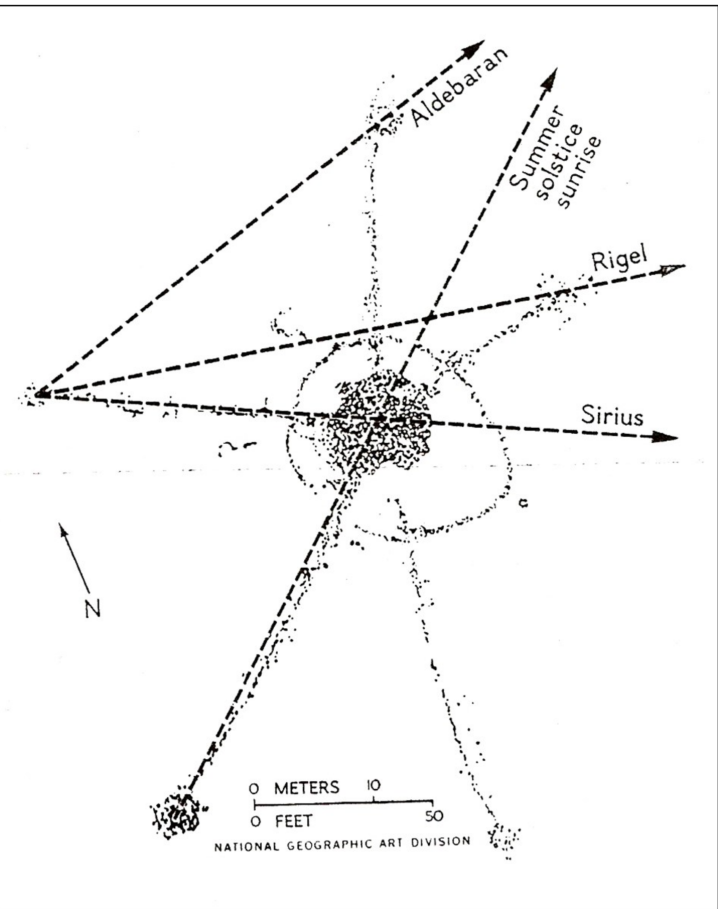
Arapaho were also in the region in this time period and may have built it. Perhaps sacred sites like the Bighorn Medicine Wheel were used by more than one tribe.

### Many Other Wheels

The Bighorn Wheel is the most recent and best-preserved Medicine Wheel but 40-50 wheels are known, many of which are much older. They are scattered over a vast area from the Canadian Prairie Provinces into the central Great Plains and are sometimes found in very high mountains. A crude Wheel was found on Trail Ridge in Colorado. Following Eddy's lead, archaeologists Tom and Alice Kehoe took sightings of the Moose Mountain Medicine Wheel site in southeast Saskatchewan and, though it is configured differently than the Bighorn Wheel, it has very similar astronomical alignments. Their evidence indicates that the Moose Mountain Wheel was constructed about 440 B.C. (i.e., 2,463 years ago). Some scientists believe it is considerably older.



Dr. Eddy's Map of the Bighorn Wheel Alignments



The Moose Mountain Medicine Wheel

### The Date Debate and Who Done It?

Dating the construction and use of the Bighorn Medicine Wheel is difficult and imprecise. A tree branch found lodged in one of the perimeter cairns was dated, using tree rings, to about 1760 A.D...or 263 years ago. It is not certain whether that was the date of the Wheel's construction, but if this is the case, it suggests that the Wheel is quite recent in archaeological terms. Shoshonean people, including the buffalo-hunting Eastern Shoshone and the so-called Sheep Eaters, are known to have lived in the region for centuries. The Apsaalooke (a.k.a. Absaroka or Crow) tribe is also known to have arrived in that area in the 1700s, after diverging from their Hidatsa farmer relatives along the Missouri River. The Cheyenne and

The Majorville Cairn and Medicine Wheel on the Black-foot Nation in south Alberta is even older, dated at 5,200 years before present. Interestingly, the Majorville site is similar in construction to the Bighorn Wheel (i.e., a large

central cairn or circle connected by 28 spokes to a concentric outer circle, the entire structure having a diameter of nearly 100 feet).

### Cosmic Curiosity

Some behaviors, such as creation of some form of art, music, and religion seem ubiquitous in human cultures. Fascination with, and desire to understand, the cosmos seems to be one of the shared commonalities. Ancient indigenous cultures throughout the Western Hemisphere were not an exception. Within all of those societies there were careful observers of the sun, other stars, the moon and planets as well as unusual phenomena such as comets, eclipses, supernovas, meteor showers and auroras. Many cultures in the Americas used astronomical features and events such as lunar cycles, summer and winter solstices, equinoxes, etc. to establish calendars they used to time ceremonies, plant or harvest crops, etc. Prairies are often described as "seas of grass" and vast portions of them are nearly devoid of landmarks. Surely, inhabitants of these graminoid "seas" used the sun, stars and constellations to navigate when they made long excursions to hunt, trade or make war. Astronomers and archaeologists have now documented hundreds of sites where ancient indigenous people made alignments to predict the rising and setting sun on the solstices. In places here they built more permanent settlements, like the pueblos of the southwest and the mound-building cultures of the eastern woodlands in North America, or the vast agricultural civilizations of Meso and South America, buildings, temples, effigies, and sometimes, entire cities were aligned with solstices.



The Majorville Medicine Wheel

Medicine Wheels as well as star patterns in petroglyphs, pictographs, painted buffalo robes and other ceremonial objects, indicate that the hunting-gathering cultures of the Plains and mountains also had sophisticated knowledge of celestial features and events. Dr. Ray Williamson, an astronomer who wrote what is probably the most complete book on the cosmology of Indigenous Americans wrote that, "...they (the Plains tribes) had well-developed myths and folktales. They also possessed distinctive cosmologies and their own astronomy, which was well adapted to their needs for ritual and sustenance."

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## Catch the Dream...



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**Donations also accepted (via PayPal) through "Donate" button at [vorebuffalojump.org](http://vorebuffalojump.org).**

**Contact us by e-mail at [info@vorebuffalojump.org](mailto:info@vorebuffalojump.org).**

*The VBJF is a 501(3)(c) non-profit organization. The Foundation is administered by a volunteer board and has almost no administrative overhead. Membership dollars and contributions go almost entirely to fund site improvements and interpretive programs.*





### Thoughts on the Vore Buffalo Jump from Hulett 4th Graders

Wyatt - Thank you for letting us come on a field trip. I loved digging up arrowheads. I have arrowheads at the ranch I live on and I like to rock hunt. I learned some cool facts.

Meredith - Thank you so much for letting me keep the arrow head. I loved the inside the teepee too because it was beautiful and had so much information for us to learn. I liked the rocks, the arrow heads, the arrow head classification chart and the big buffalo hide map.

Sawyer - Thank you for letting us dig the arrow heads. It was so fun I wish I could do it again. I have never seen an arrow head in my life until we went to the Buffalo Jump. I am so happy you let us come to the Buffalo Jump. I appreciate you for all of your knowledge and hard work.

Freyja - I really like the field trip. My favorite part was when we went down to the Buffalo Jump and we got to see all the bones and the cool teepee. I also really liked the digging for the arrow heads. It was really fun! I especially like that. Thank you so much for it SO MUCH!

Parker - Thank you for letting us come to the Buffalo Jump. I loved learning about the buffalo, how the Native Americans lived, and their ways of staying alive. The way they lived was unbelievable.

Ida - Thank you for letting us come to the buffalo jump. It was so cool! My dad loves the arrow head you let us keep. He put it with the rest of his arrow heads and said the color of it is pretty.

Mady - Thank you for letting us throw the atlatl. I am so surprised that the hole is so big, it doesn't look that big from the interstate. I am so happy that you let us come during the school day too. Thank you again to everyone who helps keep the Buffalo Jump open for all to learn. I so appreciate you for keeping it nice. It is nice to go there.

Brodi - I am so glad that we do not have to live in a tipi like the Native Americans did. I did not know that they were so small, I thought they were bigger than that.

Harper - I loved learning about how the Native Americans caught the buffalo and I enjoyed looking at the bones, and digging for arrowheads. I loved looking at the different patterns on the arrow heads, as well as the different colors, shapes and stones.

Max - It was cool to see the buffalo jump and the bones.

Mrs. Backen - There is no better place for us to see this amazing record of Native American history. Fourth grade students learn about Wyoming history, particularly Native American history, and how their cultures utilized the buffalo for their daily needs. It is wonderful to have the Vore Buffalo Jump near to us so that I can count on it as an educational field trip each year that perfectly aligns to our learning.

