

**The Sound of Thunder,
Acoustical Project on the San Juan River**

with Steve Waller and Carol Patterson,

Additional voice and percussion by

Janet Lever-Wood and Cody Little

April, 25, 2022.

Sponsored by a research grant from
the Utah Rock Art Research Association.



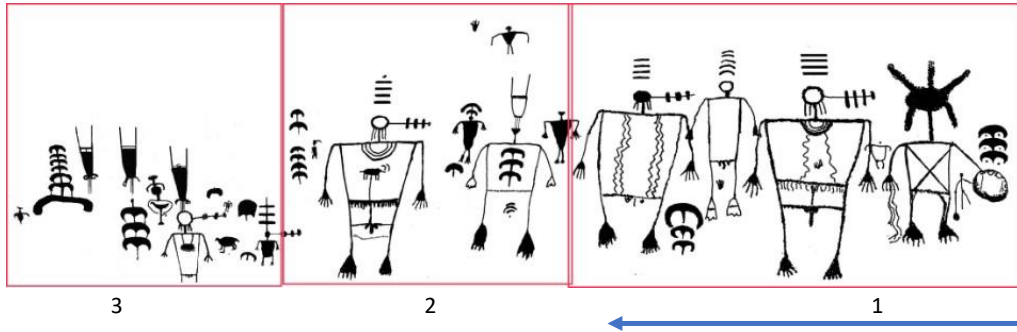
This project was conceived from my interpretation of the arc symbol found in several panels along the San Juan River that according to the ethnographic literature, are associated with the sound of thunder. It is mentioned in the mythic text as the sound that the Koshari creates with a drum. The Pueblo people believe that by imitating the sound of thunder, it entices the clouds to bring rain. These arc symbols are found at four sites on both sides of the San Juan River.

The Katsina Panel, Basketmaker II petroglyphs, (400 BC to AD 600 on the San Juan River



The Katsina panel is well known to visitors boating down the San Juan and now one can drive right up to the panel. I have divided it into three parts for analysis and to simplify the information it contains.

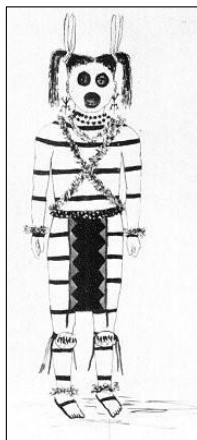
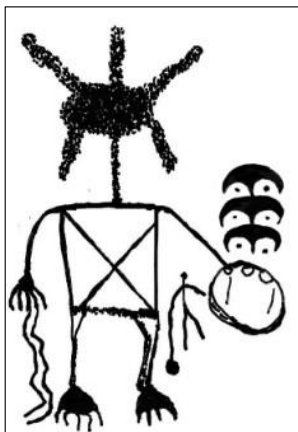
The Katsina Panel divided into three parts counting from right to left.



Reads from Right to Left (all Ancestral Pueblo tradition)

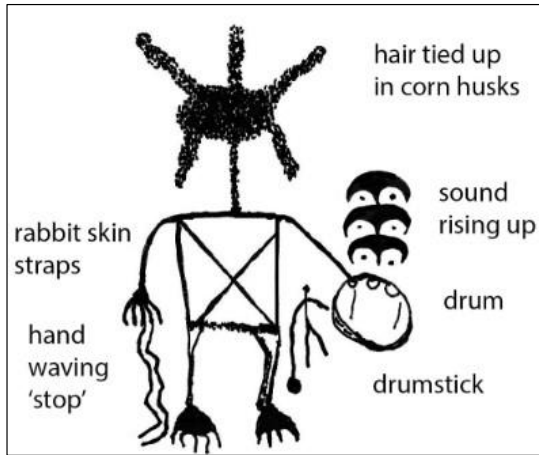
The Katsina panel has four large bulky figures along with one strange one with spikey hair arrangements. This figure is known only to the Keres speaking Pueblo people as the Koshari. He is the first man created, Iatiku, the female creator, who instructed him to teach the people how to conduct a rain ceremony to get rain for their corn to grow. The first lesson was how to construct and play the drum. The second lesson was how to dance. The third lesson was when to stop dancing when he signaled with his hand gesture. As the Koshari beats the drum, the beats rise up out of the drum he is holding. They rise up between the legs of the two figures on the left in panel one. They beat against the chest of the figure in panel two. In Panel Three, they rise up all around the figures with tall water vessels above their heads causing them to open on the bottom and spill rain water downward.

Koshari in the Keresan Tradition



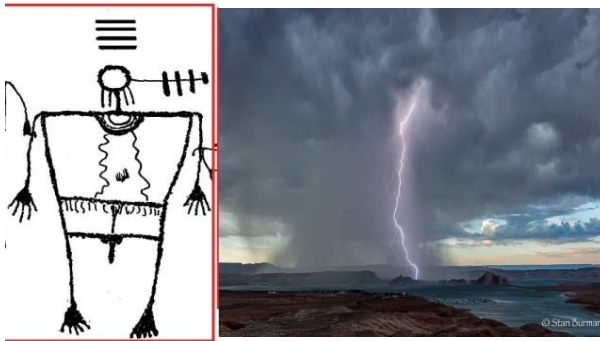
“The Koshari wears his hair in four horns and a feather between them” Boas (1928: 292) “His hair is tied up in corn husks and he wears crossed straps of rabbit fur, over his chest.” (Stirling 1942:45). He is often shown with a drum. He was created to teach the people rain ceremonies and to play the drum to emulate thunder.

The Koshari in the Keresan Pueblo Tradition

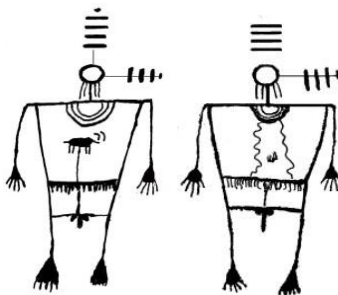


The **Myth**: *Koshari* (Keresan) “the first man created by Iatiku was Koshari;”
 “Ko’shari received directly from the sun valuable medicine for rain”

Lightning on their chest



How to represent sound?

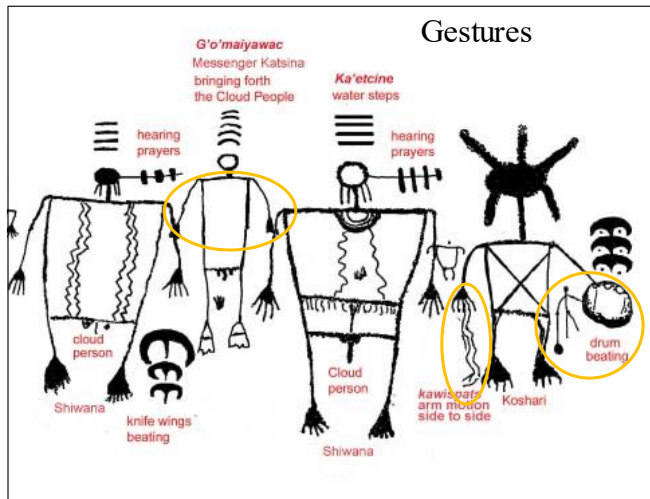


Ethnographic Accounts of Kiva Bells

Lithophones are found in archaeological sites in the southwest, mostly scattered around and ignored by archaeologists. Documentation does exist where a pile of stones were found at the entrance to a kiva. Informants told the archaeologist they were ‘kiva bells’ used to call the rain priest into the kiva for prayers to the clouds for rain. The image of kiva bells represents the sound of ringing rocks or bells. The Katsina panel shows the kiva bells lined up with the sound

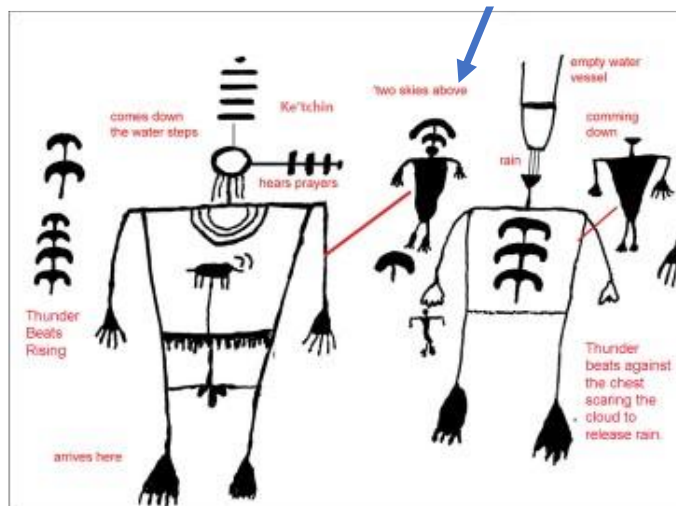
going into ears of the Cloud Beings. (remember, the panels read from right to left, so the sound bars are going into their ears, not hanging out from their ears) The flat lines above the heads of the Cloud Beings are called 'water steps' that they use to descend down from the sky. These are spirits, cloud spirits with lightning going down their chest and called "Shiwana"

Panel 1



Koshari beating the drum to produce the sound of thunder.
Koshari using the arm motion, called *kawispats* to stop the dancing Messenger Katsina 'bringing forth' the cloud people.

Panel 2



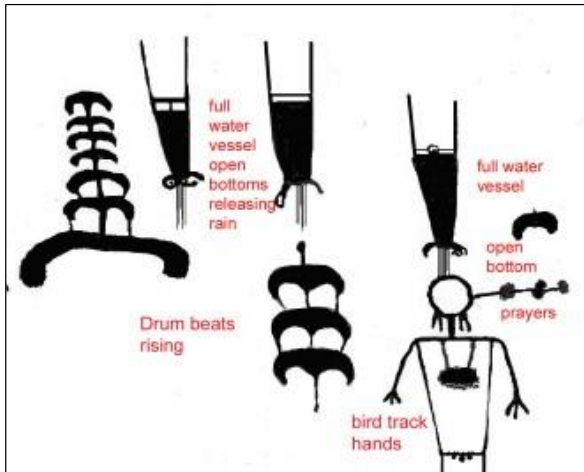
Panel 2 shows the cloud with thunder pounding upon his chest. The water vessel above his head is pouring rain down.

Knife Wing is associated with thunder. Here is a quote from the text.

• “The thunder people have human forms, with wings of knives, and by flapping these wings they make a great noise, thus frightening the cloud and lightning peoples into working harder.”

• Stevenson, *Sia*, BAE 11, Pg 38 **Cloud people**

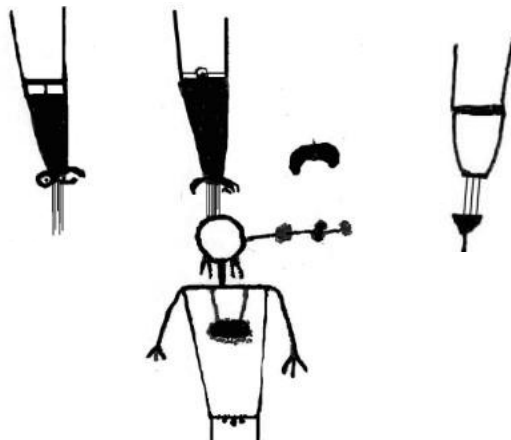
Panel 3



• Metaphors

- Sound of prayers go into the ear.
- Cloud is a vessel and rain is released from the bottom.
- Sound of thunder rises up into the sky causing the clouds (water vessels) to spill their water.

Mythic Text = “The water is brought from the springs at the base of the mountains in gourd jugs and vases, by the men, women, and children, who ascend from springs to the base of the tree and thence through the heart or trunk to the top of the tree which reaches to *Ti'nia* (world above the earth); from there it is passed on to the designated points to be sprinkled” (Stevenson, 1890: 38).

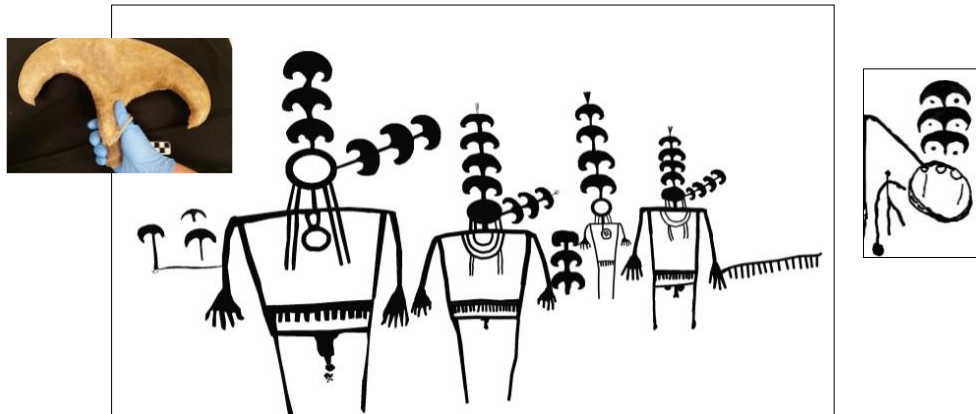


The Cloud people (Shiwana), hide behind masks of clouds that come in different forms, and behind the scene, these cloud people are working hard to water the earth. The rain is held in pots that the cloud people use to water the earth

I use the illustration of the large burden baskets with handles to illustrate the large vessels with water above the cloud's head. These Basketmaker petroglyphs were done during the pre-ceramic era and drawn to convey the idea of a water vessel held up in the cloud.



Thunder Beings and a Thunder Rattle



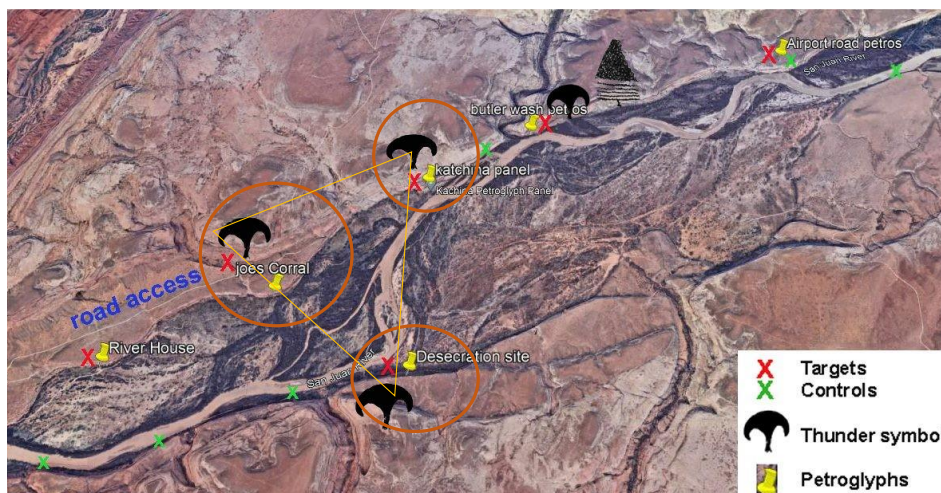
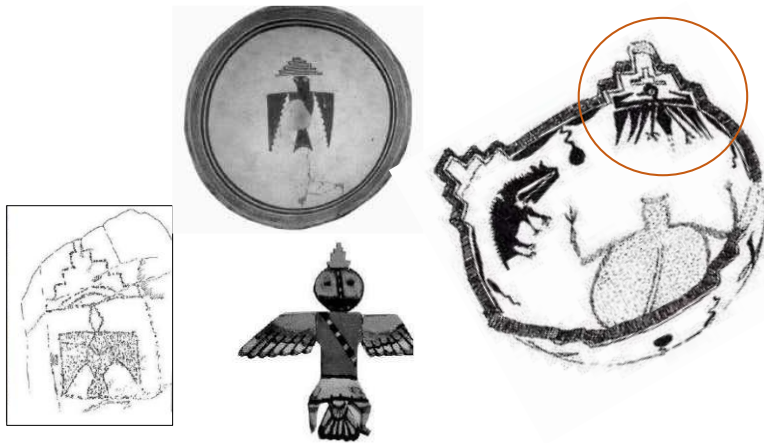
Down river is another panel with very old figures with arcs emanating out of their heads and mouths. The figure on the right is the smallest and comes closer to stand on the left even larger. On his arm is attached a stem with an arc that looks very similar to what has been found to be a rattle. I call it a thunder rattle. (Cira AD 1200)

The arcs are associated with 'knife wing' who beats against the chest of the cloud to make it rain. This symbol has evolved into what is known today as a Thunder Bird among many Native tribes. One can see from the simple illustration of the arc shape called 'knife wing' a symbol of thunder to the more elaborate thunder birds. The Zuni version circled in blue, has a cloud on top of his head.

Knife-wing



Older examples of the thunder bird and the cloud over his head are found in this illustration of pottery and a petroglyph.



So, my theory was to test the sound and ecos along the river at control sites as well as petroglyph sites that display the symbol for thunder.

Steve Waller conducted the sound recording and testing for our three day boat trip down the San Juan River.

It is our understanding that we will present a zoom webinar to discuss our findings and show video clips of our recording efforts.

Carol Patterson