

UNUSUAL MILLING STONE FROM BATTLE MOUNTAIN, NEVADA

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A surface find near Battle Mountain, Nevada by Mr. Raymond Sims in the vicinity of some turquoise mines owned by him. The surface

*Mr. Ray Sims found an unusual milling stone was found on the surface by Mr. Ray Sims of that city, and he has now donated this*

find was a milling stone of distinctive form, appearing strange

when compared to the common mano used aboriginally to reduce seeds and other vegetal material. Upon showing interest in the specimen

*when I expressed a desire to analyze the design, Mr. Sims gave me the artifact to be donated to FSU (insert)*

Mr. Sims gave me the artifact. As you will note further in the text, it was more unusual than at its first soil covered inspection.

After being cleaned it was intended to be donated to the Idaho

State University, the cleaning process took place in the kitchen sink, using a stiff nylon brush very briskly and water

from the tap. When the residue was being washed down the drain,

it was noticed that there were particles of turquoise in the

dirt. It was unfortunate that the cleaning removed a large part of the imbedded material, fortunately after drying there

still remained firmly imbedded in the vesicules numerous

flecks of turquoise and also minute pieces of red cinnabar mercury

( a mercuric mineral compound). Incidentally mercury mines are found some twenty miles North of where the milling stone was found.

The finding of not one but two colorful mineral pigments

in the working surface of the milling stone definitely places this

specially designed implement as one used by a maker of paints

or powders. There is little doubt that colors like sky blue

of turquoise and the beautiful red of cinnabar would be

held in great value by artists of the past or present. During a recent

Conversation with Dr. Francois Berdes, I told him of the milling

stone and he in turn told of his Step father, a well known European

artist insisting on grinding his own pigments from mineral

compounds and then blending them to his own liking. Colors compounded

from the different mineral salts would not fade and were long enduring

*He told of his further... below*

*regarding my conclusions about this artifact being used as a milling stone for grinding minerals for paint use he agreed that this was logical.*

*However with turquoise and mercury are found in this vicinity in basket.*

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brochantite of the Corocoro copper deposit, Bolivia, was used by the local Indians as a source of green pigment before the Spanish arrived (Berton, 1936). The Indians used the brilliant red hewettite ( a Hydrous calcium vanadate) to make pictographs on the sandstone cliffs of Emery County, Utah. Within one-half mile are commercial vanadium deposits. Black pigments were produced from lignite (Pueblos), from manganese dioxide (Pueblos and Californians), from coal (Haidas), from graphite (New York, New England, and Alaska Indians and Eskimo), from sphalerite ore (Pueblos, from micaceous hematite (Yukon Indians), or from galena (Apache-Yumas). The latter also used calcite and magnesite as white pigments. The Oubeways, on the other hand, used iron sulphate derived from decomposing pyrite as a black dye. The Seri, inhabiting Tiburon Island, Sonoro, used ~~durantite~~ dumortierite as a blue face paint (Kroeber, 1931, p. 27). The Pueblos used Jarosite in addition to yellow ochre for yellows and browns ( Cosgrove, 1932) (quote)

Analysis of the blacks and reds of some of mans <sup>earliest</sup> paintings in Southern Europe were derived from the oxides of manganese and iron.

Special techniques are used to-day in paint manufacture to finely grind and mix <sup>mineral</sup> pigments and oils as they were in times <sup>to produce paints similar</sup> of prehistory. The design of the <sup>aboriginal</sup> milling tool shows that it was used in a rocking motion to crush the large particles and then a dragging motion forward and aft to further powder the pigment mineral. Both ends of the underside of the stone have assumed a use polish from the gentle dragging of the material to the center of the milling board or stone which, unfortunately, was not found. Hopefully one day such an object will be located <sup>which</sup> that matches the Battle Mountain milling stone.

A description of this particular paint milling stone is as follows:

*to those used by men of A*

CG. 35. 22. 1. 3



22 Cm. Long, 9cm. wide and 4 Cm. thick. <sup>of an</sup> The lithic material is an enriched, vesicular basalt, <sup>there is a natural filling of</sup> on the dorsal side and within the vesicles <sup>of what appears to be</sup> are evidence of filling by probably olivine, calcite and possibly other crystalline minerals. The igneous rock appears to be considerably more dense than the common

extrusive basalt. The milling stone has been carefully shaped <sup>by</sup> by what means is not known <sup>but there is no evidence of</sup> as there is no evidence of a pecked surface. The dorsal part and sides have <sup>acquired</sup> a sheen, probably <sup>due to</sup> acquired by constant contact with the workers hands. The ~~ventral~~ <sup>the</sup> side or the working part <sup>of</sup> also has a dull polish with <sup>increased</sup> greater polish ventrally and at the distal and proximal ends. Upon <sup>Examining the stone</sup> examining the stone

using a 15X triple hand lens, <sup>with</sup> one can still see forty or fifty flecks of turquoise still imbedded in the vesicules, <sup>revealed</sup> one flake has been polished where the turquoise was in contact with the rubbing stone or board. The innermost deposits within the vesicules were of cinnabar, indicating that the milling stone was first used to grind red pigment, <sup>then</sup> before grinding the turquoise. The metate or rubbing board, <sup>used with this stone</sup> was probably also of special design that conformed <sup>to</sup> with the hand milling stone. <sup>but we do not have this for verification</sup>

One can form several significant conclusions from the specialized Battle Mountain Milling stone. Archaeologically, hand stones, <sup>whether</sup> wether they be percussors used for flintworking, ~~#####~~ ~~#####~~ pestles, manos, rubbing stones and others of loosely <sup>implied</sup> implied functional purposes have been noted and then cast aside as being non-diagnostic. In reality and from close examination of the paint milling stone, they could contribute considerable information regarding extinct cultures. The Battle Mountain milling stone has brought to our attention the possibility of evaluating the materials imbedded in the cavities, cracks and fissures. Microscopic examination of substances being reduced

*The sides are convex + the top slightly rounded. The ends on the ventral side are curved toward the dorsal side & have rounded corners. The ventral side is probably flat. Function is present on the ventral side & even more pronounced on each end.*

