



REVIEW ARTICLE

THE PROSPECTING REPORT ON ROCK ART OF HELANSHAN GAOFU VALLEY

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ABSTRACT

The author accidentally found several photos taken by backpackers from a Ning'xia outdoor activity group — Tabgach Tribe. These photos contained numerous petroglyphs that we had never seen before. These petroglyphs were discovered near Nuanquan Village of Chonggang Town, Pingluo County, in a valley known as Donkey Trench. By reviewing previous studies on Helanshan rock art, we found that just a few petroglyphs were recorded by the book *Helanshan Rock Art*, which was compiled by North Minzu University. Based on photos taken by the backpackers, we identified the location of Donkey Trench at Google Satellite Map. We confirmed that the valley's name was Gaofu Valley by contacting local Forestry Management Station. Immediate prospecting of the Gaofu Valley revealed many pieces of rock art, with shapes of concentric circles, spirals, handprints, riders, animals, symbols, hunters, human faces etc.. The findings were remarkable complement to rock art of Helanshan.

KEYWORDS

Rock art, Helanshan, Gaofu Valley

1. INTRODUCTION

Gaofu Valley is situated at the foot of the Helanshan mountain, 3 km from the renowned Dashuigou Rock Art Distribution Area. It is governed by Chonggang Town, Pingluo County, Shizuishan City. Based on our on-site investigation, we confirm that Gaofu Valley plays an important role in the Helanshan rock art. There are many petroglyphs which display a wide variety of subjects. The main subjects are concentric circles and spirals. This distinguishes Gaofu Valley's rock art from the others in Helanshan. In addition, several petroglyphs, including animals, symbols, human faces, hunters, handprints, riders and human bodies, are chiseled into the lateral of the rock wall of Gaofu Valley beside concentric circles and spirals. They are exceptional examples of Helanshan rock art. Meanwhile, at the barren sands outside of the opening of Gaofu Valley, there is a county protected historic site — Laowan Cemetery, which can be traced back to the Western Xia dynasty. There is a also loess-made beacon tower on the mountaintop south to the valley's opening.

2. THE OVERVIEW OF GAOFU VALLEY ROCK ART

The author followed the group of rock art prospectors and explored the Gaofu Valley. Due to the lack of specific location information on the satellite map, it took a long time to find Gaofu Valley in situ. After passing three quarries consecutively, we arrived at the end of the route at the foot of the mountain. The prospecting group found a single piece of rock art portraying a group of animals. The object was less than 5m from the road's terminus (Figure 1). That is where our search for rock art began.



Figure 1: Rock art of single-animal-motif group

At 1km south of the Gaofu Valley, our prospecting group started the investigation. We further trekked 2 km inside the valley and prospected more than 50 pieces of rock art. Over 50 prospecting forms for rock art were filled out. The titles, methods, directions and amount of rock art, and the surrounding environment were meticulously registered. The majority of these petroglyphs were hard to recognize, and some

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petroglyphs were indecipherable, especially the single-motif rock art on the southern hill of the Gaofu Valley. During the prospecting, we found that nearly all the petroglyphs were distributed along the valley's 3-4m tall stone walls. Rarely were petroglyphs discovered on stone walls taller than 20 meters. At the hill south of Gaofu Valley were numerous single-motif petroglyphs chiseled on giant rocks. Most of them were depictions of big animals, hunters, or motifs. Besides petroglyphs, there was a fire-beacon shaped historic site on the flat-topped ridge south of the Gaofu Valley's entry. It could be an ancient military structure, although its construction date was unknown.



Figure 2: The fire-beacon shaped historic site

3. THE METHOD OF MAKING GAOFU VALLEY ROCK ART

Rock art can be made by chiseling, grinding, the combination of chiseling and grinding, and colored drawing. They can be further subdivided into the techniques of hammering and chiseling, the method of grinding marks on the rocks or the method of scratching marks. Almost all petroglyphs at Gaofu Valley were made by chiseling and grinding and none were colored drawings.

Chiseled petroglyphs were made by removing sections of rock using hard stone or metal tools. The lines of rock art were made of large or small dots chipped between one another. There were some dots outside of the lines due to poor chiseling. When touching the lines, you can feel evident bumping dots within the lines. (Figure 3) Figure 3 shows two chiseled animals and some chiseled dots. They were uncommon in Gaofu Valley because they were made on the ground. The contours of the two animals were made of fine lines with clearly carved dots. We can therefore confirm that this piece of rock art was made by chiseling. Gaofu Valley and the rock art near the valley were seldomly made by pure chiseling. Only one or two petroglyphs were chiseled, and most were made by both chiseling and grinding.



Figure 3: Rock art of animals

Grinding is to repeatedly scratch on the rock using stone or metal tools, in order to form lines or marks and finally make a complete petroglyph.

In general, the ground rock art has shallow marks; flat, smooth, and broad lines, without chiseled traces or dots. Compared with chiseled rock art, it had distinct features. (Figure 4) Figure 4 is a newly discovered rock art with single large animal motif and symbols. It is located at the southern slope of Gaofu Valley. The large animal seems to be a wild hog, with protruding tooth and strong extremities. There are two bumps on its back. According to the image, we can find that the scratches on the entire petroglyph are shallow and smooth, lacking identifiable chiseled dots. Therefore, we confirm that this petroglyph was made by grinding. It is quite uncommon to see Helanshan petroglyphs depicting a single animal as enormous as this one.



Figure 4: Rock art of an animal and symbols

It is difficult to determine if the rock art was created by chiselling or grinding, or by both. To make petroglyphs, the outline was ground first, and the rock was further chiseled and hammered for polish. These petroglyphs are masterfully crafted, with smooth lines produced by grinding and deep imprints produced by chiseling. They are valuable works of art. Some petroglyphs were chiseled first and then ground. They are as exquisite as the others (Xia, edited by Li, 2011). It is difficult to determine if the petroglyph was ground before being chiseled or the opposite. The analysis must consider the chiseling points, engraved marks and colors. (Figure 5) Figure 5 shows a single motif rock art depicting four riders. In a single-motif rock art, the content of four riders is rarely seen. The four riders were made by both grinding and chiseling, resulting in clean lines and deep grooves. There are both large and small chiseled dots surrounding the motifs, as well as some ground lines.



Figure 5: Rock art of riders

4. SUBJECT MATTER OF GAOFU VALLEY ROCK ART

The subject matter of Gaofu Valley rock art includes a wide variety of things, such as concentric circles, spirals, animals, hunting, symbols, human face, and riders. Among them, concentric circles, spirals, motifs

and animals are most often seen.

4.1 Concentric Circles and Spiral Motif Rock Art

Gaofu Valley's numerous concentric rings and spirals are infrequently observed near the eastern foothill of Helanshan. Numerous intricately carved petroglyphs with concentric circles and spirals are an essential aspect of Gaofu Valley rock art. With this distinguished feature, rock art of Gaofu Valley takes a prominent position in Helanshan rock art. The concentric circles and spirals do not exist on their own. Most rock art with concentric circles and spirals are distributed along with human face motifs, animal motifs, symbols, circles, and riders on the same stone wall. Their meanings should be further investigated. Figure 6 depicts a petroglyph on the southern cliff face of Gaofu Valley. It consists of a concentric circle, animal motifs and symbols. On the surface of the rock art, there are Chinese characters in paint, which destroy the whole view of the art. The whole petroglyph is made by grinding. The concentric circles in the middle are made of wide lines and deep marks, with one circle point at the center and three circles from inside to outside; at the upper left of the concentric circles, there are 7 animals made of single lines; at the left front of the stone wall, there is a symbol made by grinding. However, the marks are so shallow that it is difficult to discern the entire image.



Figure 6: Rock art of concentric circles, animals and spirals



Figure 7: Rock art of concentric circles, spirals and symbols

Figure 7 shows a petroglyph on the north side of the Gaofu Valley, consisting of concentric circles, spiral patterns, blurred human faces and circular symbols. The whole petroglyph was made by grinding. An indistinct human face in the lower left can only be identified by its faint outline. Spiral patterns with smooth lines and shallow carvings are in the central and upper part of the art rock, and four concentric circles with smooth lines and shallow carvings are in the central and lower part. In the lower right part of the rock art, a symbol composed of four

circles connects with horizontal and vertical lines. Such a combination of concentric circles, spiral patterns, human faces, symbols, and other themes is very rare in the rock arts discovered in Helan Mountain and has not yet been found in other regions.

The Figure 8 shows a classic petroglyph on the south side of the Gaofu Valley. The whole petroglyph consists of three concentric circles, three human bodies and an animal. The three concentric circles are irregular in the central and upper part with shallow carvings and discontinuous outer circle. The three human bodies are in different sizes. The larger one is on the left of the petroglyph with clearly visible head and limbs, but the facial features are unclear. The left arm raises horizontally and connects to concentric circles. The upper right arm raises horizontally, and the lower arm is bent upward and perpendicular to the upper arm. The hand was engraved into a round shape and the body is decorated with diamond-shaped squares formed by intersecting lines. Another two human bodies are smaller and one of them is in the upper part to the other. The upper smaller one is opposite to the larger one. The right arm raises horizontally and connects to concentric circles. The upper left arm raises horizontally, and the lower arm is bent upward and perpendicular to the upper arm. The fingers of left hand spread, and the body is decorated by intersecting lines. The other smaller human body is in the central and lower position. The limbs are recognizable, but head is hard to recognize. The left arm raises horizontally, and the right arm raises overhead. The human body is standing upon a horizontal line and its body is decorated with intersecting lines. The human bodies are engraved with simple lines, and they are connected by the horizontal line underneath their feet. Below the concentric circles and the human body, there is also an animal with very shallow carvings. The whole rock art was exquisitely made and rich in connotation, which should be further excavated.



Figure 8: Rock art of concentric circles, human bodies and an animal

Figure 9 is a petroglyph on the north side of the entrance of Gaofu Valley, consisting of three concentric circles, two riders, three animals, and a human body. The overlapped carvings and the different color of grindings indicate that these patterns were not made in the same period, which is considered as the most attractive finding. Through the color analysis of the carvings in this petroglyph, it is found that the three concentric circles, the blurred human body, the rider on the left, and the two animals with their heads turned to the left were made earlier, and the color of the carving is closer to rock's color. The carving of other riders and an animal with a head to the right is overlapped on the concentric circles and animals and the color is fresher. The three concentric circles were all carved by chisel. The concentric circle in the center overlaps with the rider, and a horizontal line carved in the upper part connects the outer circle. The concentric circle on the left consists of a circle and an arc. The riders were made by single-line carving, chisel and grinding. The rider uses left hand to control and throws right hand behind the body. The three animals made in different periods were all chiseled with simple lines. A human body is in the lower right and hard to identify. Such overlapped petroglyphs are commonly seen in this area, which fully shows the rock arts in Helan Mountain area can be dated

back to the early years.



Figure 9: Rock art of concentric circles, riders and animals

4.2 Animal Rock Art

Animal rock art is one of the important themes of rock art, but independent animal petroglyphs are not common in Gaofu Valley. Instead, most of animal petroglyphs are always found together with other petroglyphs such as concentric circles, spiral patterns, riders, human bodies, and other symbols. The Figure 10 shows a carved horse with thin line and shallow carvings. The horse in the petroglyph has



Figure 10: Rock art of single animal



Figure 11: Rock art of animals

erect ears, a head stretched forward, bent limbs, and an erect tail. It is worth noting that the creator used the natural texture of the stone surface to display the horse mane incisively and vividly. The whole rock art perfectly expresses the state of the horse on the move through the erect horse tail, curved limbs and flowing mane, and its meticulous depiction is fascinating.

Figure 11 is a single-animal petroglyph on the south slope of Gaofu Valley. Although the whole petroglyph is blurred, four animals still can be recognized. A giant animal with a hypertrophy hip, a curved tail, erect ears is on the upper left. But the head and limbs are indistinguishable. Three animals on the right side are blurry and difficult to distinguish. The entire rock art was made by shallow carving and grinding. Apart from the four faintly discernible animals, most of the rest of the area is difficult to distinguish.

4.3 Hunting Rock Art

Hunting rock art is one of the important themes and a large number of hunting petroglyphs were discovered in the Helan Mountain. These rock arts record the natural environment of the Helan Mountain at that time and the economic and social activities of different ethnic groups living here, reflecting the change from a hunting economy to a nomadic economy. The theme of hunting on petroglyphs also accounts for a large proportion of rock arts discovered worldwide. These rock arts accurately record the actual hunting activities, reflecting the social and economic activities and religious faith at that time. The hunting petroglyphs also help pass on the hunting experience and techniques to the offspring for education and tribal expansion. The inheritance of hunting skills through petroglyphs gradually pushed forward society from hunting to



Figure 12: Hunting rock art



Figure 13: Hunting rock art

nomadic economy. However, the hunting was not replaced by nomadic economy. Instead, it developed with the evolution of nomadic economy, and became an important supplement (Li et al., 2010).

Figure 12 is a hunting petroglyph in Gaofu Valley, consisting of multiple animals such as bighorn sheep, tigers, human with bows and arrows, and blurred symbols. The animals and symbols were made by chiseling and densely gathered on the rock. The tiger in large size is in the center and its lines are simple and smooth with shallow carvings. However, the vigor of the tiger is fully embodied by its exaggerated head and chest as well as its strong hind legs. The other tiger is on the upper left in smaller size engraved with simpler lines and shallower carvings. A dense group of six bighorn sheep in different sizes were chiseled on the top right, of which the two opposite bighorn sheep are particularly noticeable. Two chiseled human bodies are on the lower left. The human body on the left was chiseled with single line, slightly bending legs, holding a bow and arrow, and aiming at an animal in front. The human body on the right is chiseled with more details, holding a larger tool or a symbol composed of dots. Four animals were chiseled on the upper, central and lower side of the two human bodies. In addition, on the right side of the rock art, there are partially incomplete carvings. Figure 13 also shows a hunting petroglyph. The person on the right uses a bow aiming at multiple animals on the left side. A chiseled symbol is on the upper left with two horizontal lines, one vertical line and two arcs in the middle. The leftmost one resembles a human face, which is not on the same rock with the hunting petroglyphs. The whole rock art is made by chiseling with shallow carvings and part of the rock surface has fallen off.

4.4 Human Face Rock Art

As one of the most important themes for rock art, human face rock art is made by primitive ancestors in the form of faces of deities, spirits, ghosts, totems, animals and various worship objects in their minds, and are the highest manifestation of human worship culture (Zhang and Li, 2011). As an important historical basis for early human rituals, totem worship and ancestor worship, face rock art have always drawn great attention from experts and scholars. There is fewer human face rock art among the Gaofu Valley's rock art, rock art of human faces, and these rock art pieces exist together with rock art of other subjects.



Figure 14: Rock art of human face and symbols

Figure 14 is the human face rock art found in Gaofu Valley. This rock art consists of four human faces and several symbols, and the production method is a combination of carving and chiseling, with wide lines and deep carving marks. There are various crossed and curved lines rather than any obvious features in the four human faces; there are several "Zhong" (middle in Chinese), "Tian" (heaven in Chinese) and other symbols, as well as several animal rock arts. In addition, this piece of rock art has large, chiseled points and carving marks.

As part of this piece of rock art, the face rock art shown in Figure 15 is in the upper part of the picture. A square external outline, and a human body with legs spread apart and arms bent in the square outline

represent five sense organs. A circle is carved under the bent arms. Half of the circle is connected at the lower left of the face. and there are also chisel points in the half circle. Breaking the relationship with the surrounding animal rock art, the face rock art is superimposed on the two animals. With a combination of chiseling and grinding techniques, this human face is featured by broad lines and shallow scratches. The other large pieces of animal rock are featured by different shapes, delicacy and overlapping on each other. This paper shall not illustrate on this topic in detail furthermore.



Figure 15: Rock art of human face and animals



Figure 16: Rock art of symbols, concentric circles and human face

4.5 Rock Art with Symbols

Rock art with symbols is a special kind of abstract petroglyphs different from various human face petroglyphs, animals and plants, etc. They are simple in shape, fixed in program, appear frequently but are difficult to be untangled. Symbols are one of the important themes of petroglyphs. Among many petroglyph sites at home and abroad, there are a large number of symbols distributed in both rock carvings and painted petroglyphs. Symbol petroglyphs attract attention for the abstract patterns and strange shapes. Both the profound connotation conveyed and the meaning the artist willing to express are elusive and thought-provoking (Liu, edited by Li, 2011).

Consisting of concentric circles, rings, symbols, human faces, and circles made of chiseled dots, Figure 16 is one of the more representative petroglyphs in Gaofu Valley. The rock art is located more than ten meters above the ground and it is difficult to climb up the mountain there, resulting in a poor angle for the photo shooting and blurred photo. Based on the analysis of the carving marks of the petroglyph in the photo, although the carving marks are shallow and smooth, some chisel points

of different sizes can be found inside and outside the carving marks. The closer to the center of the carving, the smaller or even absent the chisel point is, while the chisel point at the edge of the carving or even outside the carving is relatively large and complete. This indicates that the petroglyph was first chiseled to create a general outline, and then the chiseled points were further scratched and processed based on the grinding method, so that the gradual change of the chiseled points can be seen in the carvings and edges. It can be concluded that the petroglyph was by first chiseling and then grinding. The leftmost part of the figure is a concentric circle composed of a dot and two rings; in the middle is three rings, concentric circles, symbols, and chiseled dots made in order from top to bottom; on the right side are animals, symbols and human faces distributed in order from top to bottom. This petroglyph is classified as a symbol petroglyph because the most striking part of it is the symbols made up of circles and chiseled points in the middle. The profound connotations behind are yet to be further explored.

4.6 Rider Rock Art

Figure 17 shows one of the most distinctive petroglyphs in the Gaofu Valley's rock art and this petroglyph is carved on a prominent rock wall alone. The lines are thin and smooth with clear carvings. The animal's tail is upturned and its head is raised. The spiral pattern shows the strong muscles of the animal's hind legs. The two crosses on the back of the animal resemble two people with their hands raised in the air. Among the rock art in Helan Mountains, rider rock art is very common, but it is rare that in one petroglyph, two people riding on the animal's back as this rock art in Gaofu Valley. In addition, there are also some



Figure 17: Rider rock art



Figure 18: Handprint rock art

other rider petroglyphs in Gaofu Valley, but this paper shall not list them one by one because those petroglyphs are quite blurred.

4.7 Handprint Rock Art

One handprint petroglyph was found in Gaofu Valley with two handprints carved on two stone surfaces. (Figure 18) The top handprint petroglyph is clearly recognizable. Based on the situation that the thumb is separated from the other four fingers, this petroglyph shows a right-hand handprint. The entire handprint petroglyph is made by grinding, with the five fingers naturally separated, wide palm and the hand well connected with the wrist. The palm is surrounded by a number of carved patterns of riders and animals. In addition, there is a large area of carving marks that are difficult to identify. The petroglyph of the lower hand is also made by grinding. Only the four fingers are clearly distinguishable and the thumb is already indistinct. There are also several animals and large carvings around the handprints.

5. PROBLEMS OF THE ROCK AREA IN GAOFU VALLEY

Gaofu Valley was discovered by chance. The discovery of the petroglyphs in Gaofu Valley shows that as there are many other valleys in the eastern foothills of Helan Mountain, there are many potential petroglyphs which require more field prospecting by relevant authorities. Although it was fortunate to find the petroglyphs in the outdoor forum and conducted a prospecting the petroglyphs in Gaofu Valley at the first time, due to the time reason, the prospecting of the petroglyphs in Gaofu Valley was not very carefully conducted, many petroglyphs were not discovered, and the related petroglyph information was not perfected. At the same time, as Gaofu Valley is particularly close to the quarry in Chonggang Town, Pingluo County, the nearest petroglyphs are less than 100 meters away from the quarry area, making it hard to preserve the petroglyphs in Gaofu Valley. The destruction of the mountain and the large amount of dust caused by the quarry have posed great damage to petroglyphs in Gaofu Valley. (Figure 19) According to the photos of the petroglyphs taken by Ningxia Outdoor Club in Gaofu Valley for two years, some of the petroglyphs have been stolen or destroyed, which is distressing. To their credit, the officials of Pingluo County Cultural Management Institute quickly communicated with the local government and forestry department to stop the mining of the quarry after learning that the rock art was found in Gaofu Valley and set up a stone monument of county-level cultural relics protection authority between Gaofu Valley and the quarry and implemented relevant protection measures for the protection of the rock art in Gaofu Valley. Subsequently, Ningxia Rock Art Research Center, Shizuishan City Museum and other authorities dispatched personnel to conduct a prospecting on the rock art in Gaofu Valley. Since then, the rock art in Gaofu Valley has drawn great attention from the rock art community in Ningxia.



Figure 19: A quarry near the rock art site

In summary, the rock art of Gaofu Valley in Helan Mountain is rare and precious among the rock art of Helan Mountain. The petroglyphs in this valley are diverse in themes, rich in content, and numerous in number,

especially the numerous concentric circles and spiral patterns, which diversifies the themes and contents of rock art in Helan Mountain. The rock art of Gaofu Valley has become an important representative of the rock art of Helan Mountain, along with those in Daxifeng and Xiaoxifeng Valley, Baitou Valley, Chaqikou, Helankou and Suyukou. These rock art and historical relics of different kinds and themes vividly show the spiritual and material life of the ancestors in this area in different periods and are an important basis for our historical and archaeological research on this area.

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