



E-ISSN: 2976-2421  
CODEN: JRAOCQ

## Journal of Rock Art (JRA)

DOI: <http://doi.org/10.65098/jra.01.2026.24.43>



### RESEARCH ARTICLE

# 2024 Archaeological Survey of the Rock Art in the Baicha River Basin, Hexigten Banner (Keshiketeng Qi), Inner Mongolia

Wenjing Zhang<sup>1,\*</sup>, Kaixin Huo<sup>1</sup>, Xiaokun Wang<sup>2,†</sup>, Changqing Li<sup>3</sup>, Wen Peng<sup>4</sup>, Yonggang Sun<sup>5,\*</sup>, Changfu Yu<sup>1</sup>, Yuexin Li<sup>1</sup>, Mengyuan Bao<sup>6</sup>

<sup>1</sup> School of History and Culture, Chifeng University, Chifeng 024005, China

<sup>2</sup> School of History, Department of Archaeology & Museum Studies, Renmin University of China, Beijing 100872, China

<sup>3</sup> Hexigten Banner (Keshiketeng Qi) Museum (Cultural Relics Conservation Center), Chifeng 025350, China

<sup>4</sup> Independent Researcher, Chaoyang District, Beijing 100015, China

<sup>5</sup> Chifeng University, Chifeng 024005, China

<sup>6</sup> Tongliao Museum, Tongliao 128100, China

<sup>†</sup> Co-first Author: W. J. Zhang & X. K. Wang

\* Corresponding Author Email: [zhangwenjing@cfxy.edu.cn](mailto:zhangwenjing@cfxy.edu.cn); [sunyg1978@126.com](mailto:sunyg1978@126.com)

This is an open access article distributed under the Creative Commons Attribution 4.0 International License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

### ARTICLE DETAILS

#### Article History:

Received 09 Oct 2025

Accepted 06 Mar 2026

Available online 30 May 2026

#### Online Article Code



### ABSTRACT

Beginning on June 24, 2024, a two-week systematic field survey has been carried out in the Baicha River Basin, led by the School of History and Culture of Chifeng University, in collaboration with the Hexigten Banner (*Keshiketeng Qi*) Museum, the Department of Archaeology & Museum Studies of Renmin University of China, and other participating institutions. The survey progresses north to south along the river basin, covering an area between 43°12'–42°59' N and 118°09'–117°55'55" E. A total of 16 rock art localities have been verified and documented, comprising 42 panels and 266 individual motifs. The rock art was executed mainly by pecking and grinding techniques, with additional examples of red pigment painting. The imagery is predominantly animal-themed (57%) with deer representing 63% of all animal figures. Anthropomorphic images account for 18%, accompanied by geometric motifs and mask-like human faces. Based on associated archaeological contexts, certain anthropomorphic face motifs may date back to 6,000–8,000 years BP, while the majority of animal figures are attributable to the Bronze Age. The systematic rock art data obtained through this survey provide an essential empirical foundation for integrated studies of rock art within the river basin, as well as for future conservation planning and heritage communication. These results also offer new perspectives for research and further underscore the significance of this region within the study of ancient cultures in northern China.

### KEYWORDS

Inner Mongolia, Rock Art of the Baicha River Basin, Archaeological Survey

The Baicha River Basin, located within Hexigten Banner (*Keshiketeng Qi*), Chifeng, Inner Mongolia Autonomous Region, represents one of the core areas for rock art distribution in northern China. The rock art remains preserved within this basin not only constitutes tangible evidence of northern steppe civilizations, particularly reflecting the cultural development of the ancient Xiliao River region, but also carry rich historical and cultural information. They provide irreplaceable material evidence for the study of the production and daily life, spiritual beliefs, and cultural interactions of ancient populations in this region.

The earliest written reference to rock art in the Chifeng region dates to 1929, in the *Jingpeng County Gazetteer of Rehe Province* (Kang, 1929), which records rock art discovered near Guangyi Village along the Baicha River and in the vicinity of Yushunguang. In 1981, the Zhaowuda League Cultural Relics Workstation, together with Zhang Songbai and Liu Zhiyi from the Cultural Center of Hexigten Banner, conducted a systematic survey of rock art in the Baicha River basin and the Zhenzishan area. This investigation documented nine rock art sites, with motifs primarily depicting animals and anthropomorphic faces (Zhang & Liu, 1984).

Subsequent studies gradually expanded scholarly attention to the region. In 1992, Zhao Guodong of the Chifeng Museum published two rock art sites identified in Hexigten Banner and Ar Horqin Banner (*Aluke'erqin Qi*) (Zhao, 1992). In 1993, Liu Zhiyi provided an overview of rock art in Hexigten Banner in a locally compiled gazetteer (Hexigten Banner Local Gazetteer Compilation Committee, 1993), followed by Sun Jimin's 1994 article, which offers a general introduction to the rock art repertoire known at the time (Sun, 1994). In 1998, Zhang Songbai published the results of his survey of the Tuchengzi rock art site in Hexigten Banner (Zhang, 1998a) and further analyzes six anthropomorphic petroglyphs from the Baicha River basin (Zhang, 1998b). In the same year, Su Sheng, in a regional overview of rock art distribution across Chifeng, also made reference to the Baicha River rock art. Ren Xiaohui conducted a preliminary study of the Baicha River rock art in 2003 (Ren, 2003).

In 2004, Han Lixin systematically reviewed the rock art of Hexigten Banner, organizing sites according to river systems (Han, 2004). In 2011, Zhang Yasha of the Rock Art Research Association of China at Minzu University of China assembled a research team to carry out a field

investigation of the Baicha River rock art. Han Lixin's 2013 monograph further refines and synthesizes the spatial distribution of rock art in Hexigten Banner (Han, 2013).

More recent studies include Sun Xiaoyong's 2020 thematic research on anthropomorphic face motifs in the West Liao River basin, which incorporates examples from Hexigten Banner (Sun, 2020), and the 2022 publication written by Zhou Yushu and Wu Jiakai, which presents more than one thousand documented rock art images from the Chifeng region, including those from Hexigten Banner (Zhou & Wu, 2022).

Although limited surveys of rock art in this region were conducted during the 1980s and 1990s, the resulting publications were largely fragmented due to constraints in survey conditions and research perspectives at the time. Subsequent investigations of the Baicha River rock art have also been hindered by methodological limitations, and a comprehensive understanding of its spatial distribution, material characteristics, and cultural significance remains lacking, leaving its cultural heritage value insufficiently explored. To address this research gap and obtain a comprehensive understanding of the current distribution, preservation status, and cultural significance of rock art in the Baicha River Basin, a specialized survey team was organized starting on June 24, 2024, led by the School of History and Culture of Chifeng University in collaboration with the Hexigten Banner Museum, the Department of Archaeology & Museum Studies of Renmin University of China, and other professional institutions. The team carried out a two-week systematic field survey across the basin. The survey was extensive in coverage and precise in its methodology. A total of 16 rock art localities were verified and documented. Using professional mapping, photographic recording, and micro-trace collection, a set of important rock art data combining completeness and systematicity were obtained. These results provide a solid foundation for the comprehensive study, conservation planning, and public dissemination of the cultural value of rock art in the Baicha River Basin. Based on the data obtained from our field survey, this brief report has been compiled to provide a foundation for future research in the region.

**1. GEOGRAPHICAL LOCATION AND NATURAL ENVIRONMENT**

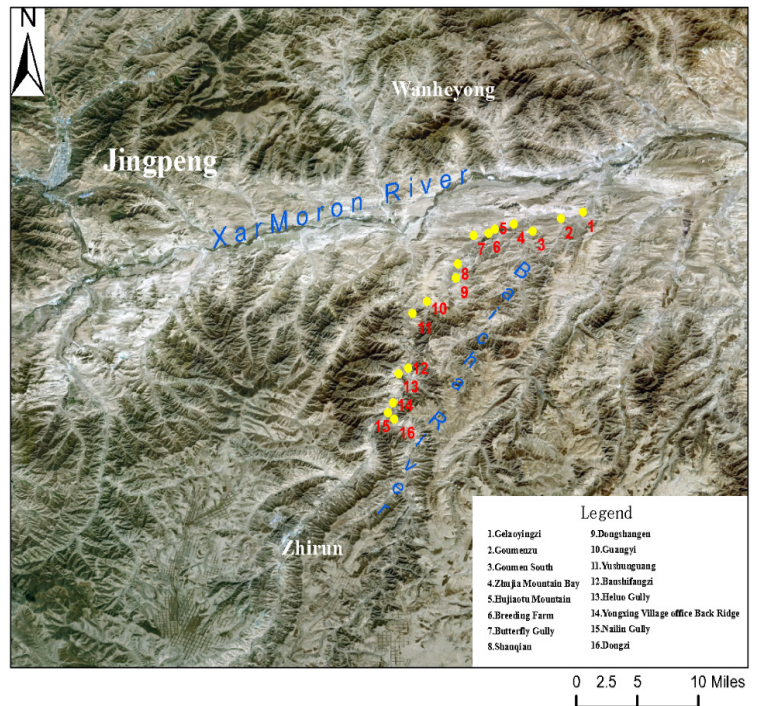


**Figure 1** Gently Flowing Baicha River (photographed by Xiaokun Wang)

Hexigten Banner is located in eastern Inner Mongolia, in the northwest of Chifeng, China. It borders Linxi County and Ongniud Banner (*Wengniute Qi*) to the east, Duolun County and Zhenglan Banner (*Zhenglan Qi*) of Xilingol League to the west, Songshan District and Weichang Manchu and Mongol Autonomous County of Chengde, Hebei Province to the south, and Xilinhot City and Xi Ujimqin Banner (*Xi Wuzhumuqin Qi*) of Xilingol League to the north. Situated between 42°23'–44°22' N and 116°21'–118°26' E, the region belongs to a temperate continental monsoon climate. It lies at the intersection of the Inner Mongolian Plateau, the southern terminus of the Greater Khingan Mountains, and the Qilaotu Mountains, a remnant of the Yan Mountains. Topographically, it is part of the low to medium mountains of western Liaoning (Note 1), and also forms a transitional zone between the Hunshandake and Horqin sandy regions, with an average elevation of 1,100 m. Influenced by geological movements, the terrain of Hexigten Banner is complex, featuring Quaternary glacial relics, granitic landforms, prairie lakes, river basins, volcanic hot springs, and plateau wetlands, representing a diverse array of geomorphological types.

The Baicha River belongs to the Xiliao River System and is one of the major tributaries of the Xilamulun River. It flows from the southwest to the northeast across the central and eastern parts of Hexigten Banner, and joins the Xilamulun River at the border between Hexigten Banner and Linxi County. The river extends for approximately 140 km, draining a catchment area of about 4,000 km<sup>2</sup>. The Baicha River Basin is characterized by a fluvial canyon landform (Figure 1), featuring high mountains, deep basins, numerous cliffs, and steep escarpments. The dominant rock type in the area is basalt, typically grayish black to black in color, with mostly smooth and flat surfaces, a texture particularly suitable for engraving petroglyphs.

The survey route followed the Baicha River Basin from north to south. The rock art sites were, as follows: Gelaoyingzi, Goumenzu, Goumen South, Zhujia Mountain Bay, Hujiaotu Mountain, Breeding Farm, Butterfly Gully, Shanqian, Dongshangen, Guangyi, Yushunguang, Banshifangzi, Heluo Gully, Yongxin Village Office Back Ridge, Nailin Gully, and Dongzi (Figure 2). The geographic coordinates of the Baicha River rock art distribution range from 43°12' N to 42°59' N latitude and from 118°09' E to 117°55'55" E longitude.



**Figure 2** The Distribution Map of Rock Art along the Baicha River

## 2. OVERVIEW OF THE ROCK ART

During the survey, the 16 identified rock art sites were categorized into 16 zones based on their respective administrative divisions and spatial distribution, and sequentially numbered in alphabetical order. A total of 42 panels containing 266 individual motifs were recorded. The production techniques are primarily pecking and grinding, often used in combination. Two main stylistic forms are identified: silhouette figures and linear contour figures. A few painted petroglyphs, executed in red pigment, were also identified, some of which were first engraved and then filled with cinnabar. A summary of the rock art from each site is presented below.

### 2.1 Area 1: Gelaoyingzi Site

This site is located in Gelaoyingzi, Wandecheng Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°12' N and longitude 118°09' E. A total of seven panels were recorded in the survey, numbered CFKQA001–A007. Most of the petroglyphs are distributed on the rock cliffs of mountains at an elevation of approximately 700 m, while some are scattered on large surface boulders on the western slope of the mountain. The rock surfaces consist mainly of black basalt, and the petroglyphs were predominantly pecked, with a few incorporating incised or carved techniques. A detailed description of each petroglyph is presented below.

CFKQA001: Two individual motifs were identified: one anthropomorphic (human face) and one unrecognizable figure. The rock surface faces south. The images were pecked, with deep incisions appearing gray in color, and are executed in a linear style.

The human face features a headdress-like element composed of several superimposed circular forms at the top of the head. The facial features are clearly defined, while the forehead bears several wavy lines, which are inferred to represent part of the headdress. The unfinished image

to the left of the human face appears to be the remaining portion of the headdress (Figure 3).

CFKQA002: Two individual motifs were recorded: one animal and one geometric figure. The rock surface faces southwest. The motifs were pecked, with gray incisions, rendered in a linear style. The animal features several radiating lines on the top of the head, a relatively elongated snout, and a robust neck, suggesting that it represents a deer. To the right, there is a geometric motif composed of two irregular circles stacked vertically (Figure 4).

CFKQA003: One individual motif was recorded, representing an animal. The rock surface faces southwest. The motif was produced using a combination of pecking and grinding, with gray, relatively light incisions rendered in a silhouette style. The animal's head is depicted with thick lines forming a pair of antlers, the neck is robust, the tail is short and upturned, and the four legs are upright, suggesting that it represents a deer (Figure 5).

CFKQA004: Two individual motifs were recorded, both human faces. The rock surface faces southwest. The motifs were pecked, with gray incisions rendered in a linear style. Both human faces display clearly defined facial contours and features. To the right of the upper face, there is an unclosed curved line (Figure 6).

CFKQA005: A total of 27 individual motifs were recorded, including 23 animals, 3 human figures, and 1 unrecognizable figure. The rock surface faces southeast. The motifs were executed using a combination of pecking and grinding, with gray incisions most rendered in a silhouette style. On the right side of the panel, there is a large deer with slender, curved, and bifurcated antlers extending almost to the tail. Surrounding it are numerous smaller deer, likely representing fawns. Above and to the right, there appear to be two human figures holding hands and one human figure wearing a headdress. The remaining animals are depicted with upright or leaping postures, short upturned tails, and, in some cases, antlers on the head. Based on their morphology, these animals are



Figure 3 CFKQA001

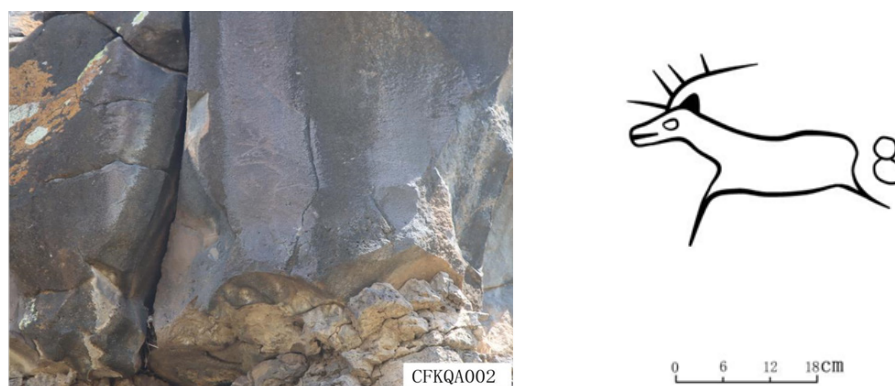


Figure 4 CFKQA002



Figure 5 CFKQA003



Figure 6 CFKQA004

mostly deer (Figure 7).

CFKQA006: Approximately 21 motifs were recorded, including geometric composite patterns. Among them are 2 human faces, 2 concentric circles, 1 concentric circle connected to a plant-like branch motif, 5 geometric figures, 5 sets of combined circles or squares, 1 human figure, and 5 unrecognizable motifs. The rock surface faces south. The motifs were created using a combination of pecking and grinding, with gray incisions in a linear style. The petroglyphs are carved on a large exposed rock on a low earthen mound. The human faces located in the central lower and right portions of the panel, lack defined contours but show eyes and mouths. On the lower right side of the rock, a motif consists of two overlapping semicircles, with a shallow depression carved at the center (Figure 8).

CFKQA007: Two individual motifs were recorded, both representing deer. The rock surface faces south. The motifs were pecked, with relatively shallow grinding marks on the body, gray incisions and rendered in a silhouette style. The left deer is large, with a robust body, upright legs, and antlers extending backward along the body. The right deer is much smaller in proportion, with shallow peck marks, curved and branched antlers, a robust body, and legs appearing to leap forward (Figure 9).

## 2.2 Area 2: Goumen North Site

This site is located in Goumenzu, Erdi Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°12' N and longitude 118°09' E, approximately 1 km north of Goumenzu. The petroglyphs are distributed along the eastern bank of the upper reaches of the Baicha River, on black basalt cliffs at an elevation of approximately 800–810 m, arranged sequentially from west to east.

A total of 11 petroglyph panels were recorded, numbered CFKQB001–

B011. The motifs were executed using pecking and grinding techniques. A detailed description of each petroglyph is provided below.

CFKQB001: Three individual motifs were recorded, all representing deer. The rock surface faces south. The motifs were pecked, with gray incisions rendered in a linear style. Of the three animals, two are on the left and one is on the right, positioned facing each other. All display antlers, robust bodies, and short, upturned tails (Figure 10).

CFKQB002: Three individual motifs were recorded, all representing deer. The rock surface faces south. The motifs were pecked, with gray incisions rendered in a linear style. The deer feature curved, branched antlers, elongated snouts, slender necks, robust and solid bodies, upturned tails, and legs appearing to leap forward (Figure 11).

CFKQB003: One individual motif was recorded, representing a deer. The rock surface faces south. The motif was pecked, with gray incisions rendered in a linear style. The head features elongated, curved, and extensively branched antlers, with a robust body and upright limbs. To the left of the deer, three Chinese characters, “古行山”, are incised (Figure 12).

CFKQB004: Two individual motifs were recorded, both representing geometric symbols. The rock surface faces south. The motifs were created using a combination of pecking and grinding, with relatively broad gray incisions rendered in a linear style. The two circular symbols are positioned on the upper left and lower right of the rock surface, respectively (Figure 13).

CFKQB005: Four individual motifs were recorded, all representing camels. The rock surface faces south. The motifs were pecked, with gray incisions rendered in a linear style. The camel heads are relatively small, with long, slender necks and two humps on the back are depicted on each animal (Figure 14).

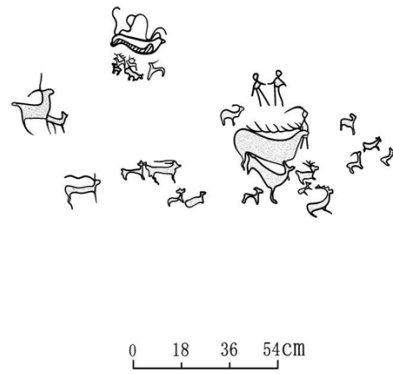


Figure 7 CFKQA005

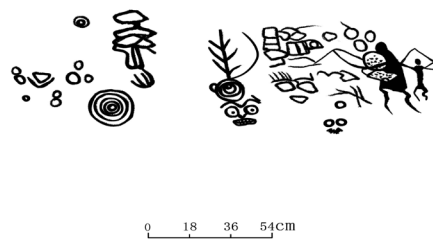


Figure 8 CFKQA006

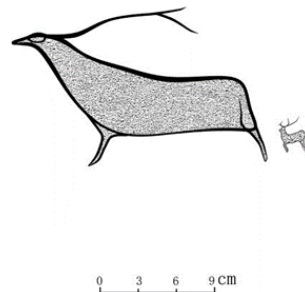


Figure 9 CFKQA007



Figure 10 CFKQB001

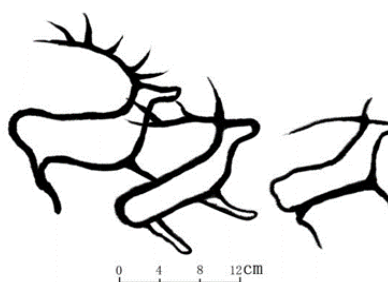


Figure 11 CFKQB002



Figure 12 CFKQB003

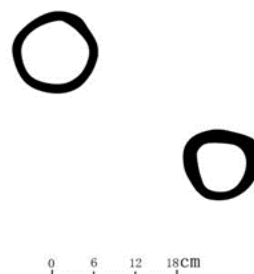
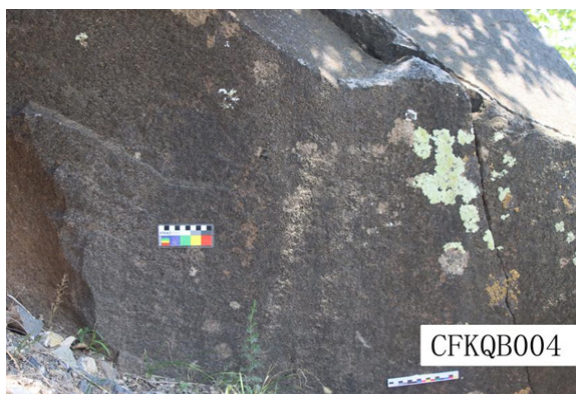


Figure 13 CFKQB004

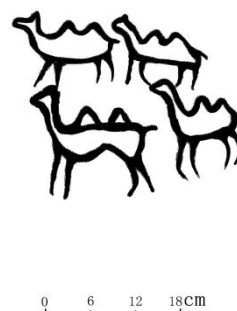


Figure 14 CFKQB005

CFKQB006: Four individual motifs were recorded, including one horse, two camels, and one geometric figure. The rock surface faces south. The motifs were pecked, with gray incisions rendered in a linear style. The horse features vertical lines extending outward from the head and neck, a robust body, and two front legs extended forward in a running posture, with a long, downward-hanging tail. Below the horse are two similarly shaped animals which, based on their double humps, are identified as camels. In addition, there is an arch-shaped figure whose left and right lines overlap with the horse's snout and body, and radiating lines are present along its periphery (Figure 15).

CFKQB007: One individual motif was recorded, representing a human face. The rock surface faces south. The motif was pecked, with gray-white incisions rendered in a linear style. The human face displays clearly defined facial features and is depicted with a grinning, teeth-baring expression (Figure 16).

CFKQB008: One individual motif was recorded, representing an animal. The rock surface faces south. The motif was pecked, with gray incisions rendered in a linear style. The head features two short lines representing the animal's antlers or ears. The body is relatively long, the tail short and hanging downward and the front legs are extended forward, conveying a sense of movement. Based on its morphological characteristics, the animal is inferred to be a deer (Figure 17).

CFKQB009: One individual motif was recorded, representing a horse. The rock surface faces southeast. The motif was pecked, with gray incisions rendered in a linear style. The head displays clearly defined ears, with a relatively long snout and a robust neck. The abdomen lines are receded, conveying a solid and well-proportioned body. The tail is long and hanging downward, and the front legs are slightly lifted, stepping forward. Based on these characteristics, the animal is identified as a horse (Figure 18).

CFKQB010: One individual motif was recorded, representing an animal. The rock surface faces south. The motif was created using a combination of pecking and grinding, with gray incisions rendered in a silhouette style. The animal shares a single body but has two heads facing opposite directions, with relatively long snouts, ears and robust necks, while only the front legs are depicted. This type of double-headed horse motif is commonly found in northern China, and based on this, the animal is inferred to be a horse (Figure 19).

CFKQB011: Two individual motifs were recorded, including one human face and one unrecognizable figure. The rock surface faces south. The motifs were incised (engraved), with gray-white incisions rendered in a linear style. The human face displays clearly defined facial features, with vertical lines on the head, possibly representing hair. Curved lines on the forehead, in combination with the eyes, appear to represent eyebrows. To the left of the human face, only a curved line remains due to breakage (Figure 20).

### 2.3 Area 3: Goumen South Site

This site is located in Goumenzu, Erdi Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°11' N and longitude 118°05' E, approximately 1.9 km southwest of the Goumen North Site. The petroglyphs are distributed on rocks atop a sandy highland formed by river erosion, at an elevation of approximately 800–810 m. The rocks are predominantly black basalt. A total of one petroglyph panel was recorded, numbered CFKQC001. The petroglyph is described as follows.

CFKQC001: Two individual motifs were recorded, both representing deer. The rock surface faces south. The motifs were created using a combination of pecking and grinding, with gray incisions rendered in a silhouette style. The two deer are arranged vertically, with elongated



Figure 15 CFKQB006



Figure 16 CFKQB007



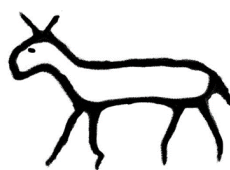


Figure 17 CFKQB008

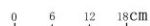
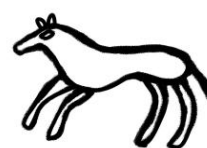


Figure 18 CFKQB009



Figure 19 CFKQB010

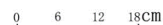


Figure 20 CFKQB011

bodies and carefully depicted waists, abdomens, and hindquarters. The upper deer stands with upright legs, its head raised, and snout upturned. The lower deer stands quietly, with antlers curving backward almost to the tail, including the branches, creating a vivid and dynamic image (Figure 21).

#### 2.4 Area 4: Zhujia Mountain Bay Site

This site is located in Zhujia Mountain Bay, Wandecheng Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°11' N and longitude 118°04' E, approximately 250 m southeast of Zhujia Mountain Bay. The petroglyphs are situated on a mountain slope at an elevation of 800–810 m, where numerous black basalt rocks are scattered. A total of two petroglyph panels were recorded in the survey, numbered CFKQD001–D002. The panels are positioned one behind the other on two rocks at the top of the slope. To the south of the slope lies the Baicha River channel, which is currently dry. Scattered pottery fragments were

also observed on the slope. The petroglyphs are described individually below.

CFKQD001: Four individual motifs were recorded, all representing animals. The rock surface faces south. The motifs were created using a combination of pecking and grinding, with gray-white incisions rendered in a linear style. The two central animals are relatively large, with antlered heads, smoothly contoured bodies, and well-proportioned abdomens and tails. The upper-mid body of the animals is decorated with linear patterns. The left-side animal is smaller, with some parts faded or unclear, while the right-side animal has shallow incisions. Based on these characteristics, the animals are identified as the deer (Figure 22).

CFKQD002: Six individual motifs were recorded, all representing geometric figures. The rock surface faces south. The motifs were created using a combination of pecking and grinding, with gray incisions rendered in a linear style. The six geometric symbols consist of four irregular circles and two irregular squares (Figure 23).



Figure 21 CFKQC001



Figure 22 CFKQD001

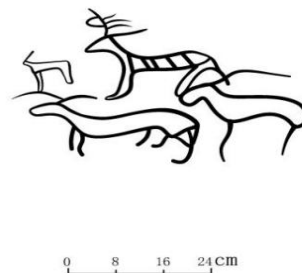
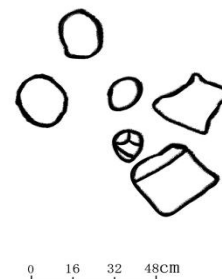


Figure 23 CFKQD002



**2.5 Area 5: Hujiaotu Mountain Site**

This petroglyph site is located in Hujiaotuzu, Dahe Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°11' N and longitude 118°03' E, approximately 4 km southwest of the Zhujia Mountain Bay Site. One petroglyph panel was recorded, numbered CFKQE001. The petroglyph is situated on a rock face at the foot of a mountain, and stone tools and pottery fragments were found nearby.

CFKQE001: Multiple individual motifs are superimposed, among which two human faces can be distinguished. The rock surface faces southwest. The motifs were engraved, with gray incisions rendered in a linear style. One human face is located at the upper left corner of the rock surface. In addition to concentric-circle eyebrows and eyes, the top of the head features curved lines forming a crown-like decoration. The other face is situated lower in the central area, showing only eyebrows and eyes. The remaining portions consist of the intersecting and overlapping lines (Figure 24).

**2.6 Area 6: Breeding Farm Site**

This site is located in Hujiaotuzu, Dahe Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°11' N and longitude 118°03' E, approximately 4.6 km away from the Hujiaotu Mountain Site. Wind-transported sandy soil has accumulated here, combining with naturally deposited rocks to form a low hill with its highest point at 827.5 m above sea level. On the south-facing slope, numerous basalt rocks are exposed, and the Breeding Farm petroglyphs are distributed on these scattered basalt rocks. Three petroglyph panels were surveyed and recorded, numbered CFKQF001–F003. Except for F001, which is located on an isolated rock on flat ground, the other two panels are situated on independent rocks on the hillside.

CFKQF001: One individual motif was recorded, representing a human face. The rock surface faces southwest. The motif was engraved, with gray incisions rendered in a linear style. The human face has a defined outline, surrounded by petal-like decorations. The facial features include eyes and a mouth with lines extending downward from the mouth resembling a beard (Figure 25).

CFKQF002: One individual motif was recorded, representing a deer. The rock surface faces southwest. The motif was created using a combination of pecking and grinding, with gray incisions rendered in a silhouette style. The antlers are branched, the body is robust, and the tail is full and upturned, with shallow grinding marks visible on the body (Figure 26).

CFKQF003: One individual motif was recorded, representing an animal. The rock surface faces south. The motif was engraved, with gray incisions rendered in a linear style. The animal has a long snout, with the head featuring antlers or ears, a short neck, a long and robust body, a tail longer and straighter than that of deer motifs, and relatively short limbs. The species of the animal cannot be identified (Figure 27).

**2.7 Area 7: Butterfly Gully Site**

This site is located in Dahelongzu, Dahe Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°11' N and longitude 118°01' E, with an elevation between 840–860 m, approximately 1.7 km southwest of the Breeding Farm Site and approximately 5 km north of Dahe Village. The petroglyphs are distributed on basalt mountains along the north bank of a tributary of the Baicha River. Three petroglyph panels were surveyed and recorded, numbered CFKQG001–G003. The three panels are located in close proximity, with a spring near G003. The petroglyphs are primarily executed using engraving techniques. The panels are described individually below.



**Figure 24** CFKQE001



**Figure 25** CFKQF001

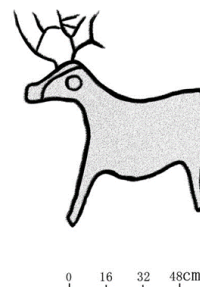


Figure 26 CFKQF002

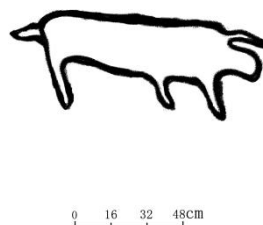


Figure 27 CFKQF003

CFKQ001: Nine individual motifs were recorded, including seven animals, one rider, and one unidentifiable figure. The rock surface faces southwest. The motifs were created using a combination of pecking and grinding, with gray incisions rendered in a silhouette style. On the upper portion of the rock, six animals are depicted. Except for the upper-right animal, which is partially obscured due to rock breakage, but appears to have ears, the remaining animals have antlers that extend outward with multiple branches, long and robust bodies and full, upturned tails. These six animals are therefore identified as deer with polished bodies. A rider on horseback is located among the central group of deer, relatively small in size and crudely depicted. In the lower-left area, an animal has a long snout, no visible antlers or ears, a short and robust body, and a long, upright tail; its species cannot be determined. The lower-right portion of the rock contains unrecognizable figures (Figure 28).

CFKQ002: Four individual motifs were recorded, all representing animals. The rock surface faces southwest. The motifs were created using a combination of pecking and grinding, with gray incisions rendered in a silhouette style, and all animal bodies were polished. The two upper animals are relatively large, with long snouts, antlered heads, slender necks, long and robust bodies, short upturned tails, and limbs appearing to step forward. The rightmost animal has long, branched lines extending from the head, depicting the tail. These animals are all identified as deer. The lower-left motif shows only a robust body and forward-leaping legs (Figure 29).

CFKQ003: One individual motif was recorded, representing a deer. The rock surface faces southwest. The motif was created using a combination of pecking and grinding, with gray incisions rendered in a linear style. The antlers are long, curved, and extensively branched; the neck is long and slender, the body is robust, and the tail is slightly upturned, depicting a leaping posture (Figure 30).

## 2.8 Area 8: Shanqian Site

This site is located in Shanqianzu, Dahe Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°09' N and longitude 118°01' E, with an elevation of 853 m, approximately 25 m north of Shanqian Village and 3.5 km southwest of the Butterfly Gully Site. The petroglyph is situated on a rock face on the eastern slope of the Baicha River Basin. One petroglyph panel was surveyed and recorded, numbered CFKQH001. The panel is described below.

CFKQH001: Nine individual motifs were recorded, including seven animals, one archer, and one rider. The rock surface faces southeast. The motifs were created using a combination of pecking and grinding, with gray incisions rendered in linear and silhouette styles. Except for the upper-right animal, whose head is unidentifiable, the remaining six animals are identified as deer based on morphological features. The archer and rider are positioned sequentially in the scene, depicting a hunting scenario (Figure 31).

## 2.9 Area 9: Wanheyong Dongshangen Site

This site is located in Wanheyongzu, Dahe Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°08' N and longitude 118°01' E, with an elevation of 858 m, approximately 1.8 km south of the Shanqian Site. One petroglyph panel was surveyed and recorded, numbered CFKQI001. The panel is described below.

CFKQI001: Seven individual motifs were recorded, including two animals, two human figures, and three geometric patterns, along with several incised lines. The rock surface faces west. The motifs were created using a combination of pecking and grinding, with gray incisions rendered in linear and silhouette styles. On the right side, a relatively large deer overlaps a smaller animal on the left, both depicted in running and leaping postures. The two human figures are positioned on the far left, facing the two animals. The incised lines of varying lengths are distributed around the deer motif on the right (Figure 32).



CFKQG001

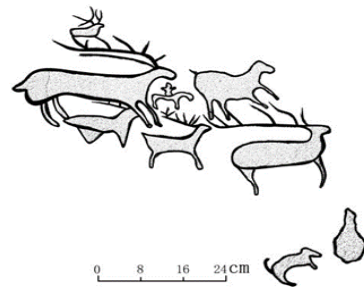


Figure 28 CFKQG001



CFKQG002

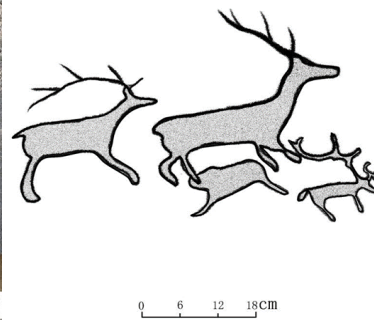


Figure 29 CFKQG002



CFKQG003



Figure 30 CFKQG003



CFKQH001



Figure 31 CFKQH001



Figure 32 CFKQJ001

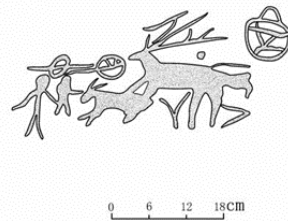
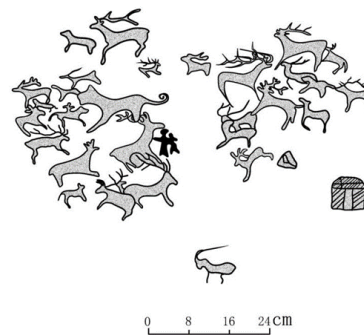


Figure 33 CFKQJ001



### 2.10 Area 10: Guangyi Site

This site is located in Guangyi Village, Wanheyong Town, Hexigten Banner, at a latitude of 43°06' N and a longitude of 117°58' E, with an elevation of 890 m, approximately 100 m northwest of Guangyi Village and approximately 300 m north of the Baicha River. The petroglyph is situated on a smooth rock face at the mid-slope of a black basalt hill.

One petroglyph panel was surveyed and recorded, numbered CFKQJ001. The rock surface has fractured into several sections, but most of the motifs are well preserved. The panel is described below.

CFKQJ001: Thirty-three individual motifs were recorded, including 28 animals, two human figures, one rider, one geometric shape, and one house motif. The rock surface faces southeast. The motifs were created using a combination of pecking and grinding, with gray-white incisions rendered in silhouette style. Many of the motifs on the rock surface overlap, and based on stylistic features and incision depth, they appear to have been carved in multiple phases. The panel is dominated by animals, with deer being the most numerous—a total of 18 identifiable deers. The deer occupies most of the composition, with branched long antlers, slender necks, and flowing, dynamic body lines, and legs depicted either standing or leaping forward; their tails are full and pronounced. In the central left section, a predatory animal is depicted with a head noticeably larger than those of the other animals, ears, a thick neck, and a robust body; its forelegs appear to lunge forward, and its tail is long and curved at the tip. Other animals, based on morphology, likely include sheep, horses, and so on. The two human figures stand side by side with their hands joined next to the deer. The rider, smaller in scale, appears to have been carved at a different time than the predatory animal to its right. Thus, the overall composition depicts two main themes: predation by a beast and herding activities. The triangular motif and house motif, with shallower incisions, are located in the lower right section of the panel (Figure 33).

### 2.11 Area 11: Yushunguang Site

This site is located in Yushunguangzu, Guangyi Village, Wanheyong

Town, Hexigten Banner, at a latitude of 43°06' N and longitude 117°57' E, with an elevation of 894 m, approximately 1.9 km from the Guangyi Site. The rock art is distributed at the foot of a basalt hill, about 300 m northwest of Yushunguangzu, adjacent to the west bank of the Baicha River. One panel was surveyed and recorded, numbered CFKQK001.

CFKQK001: A total of 46 individual motifs were recorded, including 28 human figures, 10 animals, one handprint, one human face, and six unidentifiable motifs. The rock surface faces southeast. The motifs were primarily created using red pigment application, with some showing traces of pecking. The pigments are red and the silhouette style predominates. Human figures are the most numerous, depicted either dancing, leading animals or as individual figures. Animals include long-antlered deer and sheep. A horizontal line at the top of the panel likely represents a pathway, along which humans and animals appear to be moving, suggesting that the humans are herding the animals. A handprint is located in the upper right corner. In the central portion, one human figure was first outlined through pecking and then filled with pigment, a relatively rare technique (Figure 34).

### 2.12 Area 12: Banshifangzi Site

This site is located in Banshifangzizu, Yongxing Village, Zhirui Town, Hexigten Banner, at a latitude of 43°02' N and longitude 117°56' E, with an elevation of 936.95 m, approximately 6 km southwest of the Guangyi site. The petroglyphs are distributed on the steep cliffs of the northwest hillside of Yongxing Village, adjacent to the Baicha River channel on the east side. One petroglyph panel was surveyed and recorded, numbered CFKQL001. A detailed description of the petroglyphs is provided below.

CFKQL001 comprises five individual motifs, including four animals and one unidentifiable figure. The rock face faces southeast. The petroglyphs were executed using a combination of pecking and grinding, with light brown incisions and linear motifs. On the left, two animals feature elongated muzzles, with only two short lines extending from the head, a slender neck, a robust torso, upright limbs, and short tails and are smaller in size than the animals on the right. The right-side animals also have elongated muzzles with long, curved antlers featuring multiple

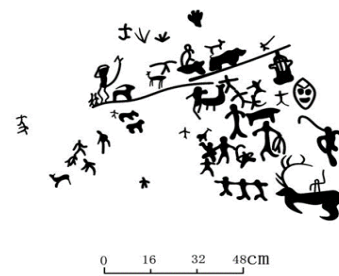


Figure 34 CFKQK001

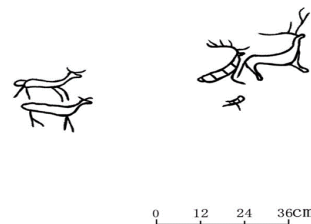
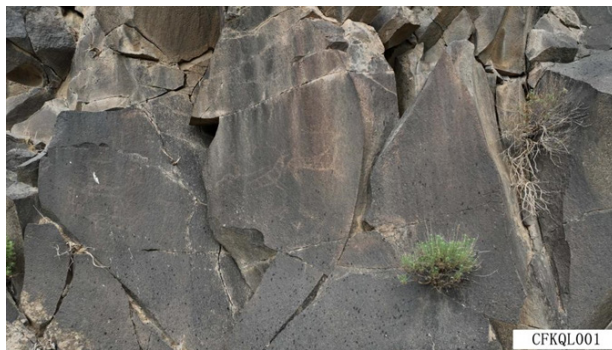


Figure 35 CFKQL001

branches, slender necks, and sturdy torsos. Based on the branching patterns of the antlers and the morphological characteristics, these four motifs are identified as deer. One unfinished figure is located below the right-side deer. Compared with earlier deer depictions, the lines here are simpler and the incisions are shallower, yet they retain similar stylistic conventions for antlers and tails seen in other regional depictions (Figure 35).

**2.13 Area 13: Heluo Gully Site**

This site belongs to the Heluo Gully of Yongxing Village, Zhirui Town, Hexigten Banner, located at 43°02' N, 117°56' E, with an elevation of 980–990 m. It lies 1.2 km southwest of the Banshifangzi site. The rock art is distributed on mountainous terrain near a dried-up river channel, approximately 3.4 km north of Yongxing Village. Two petroglyph panels were surveyed and recorded, numbered CFKQM001–M002. M001 is located on a rock outcrop at the mid-slope, while M002 is on rocks approximately 100 m above M001. The following provides a detailed description of these petroglyphs.

CFKQM001: The rock face faces southeast. The petroglyphs were created using a combination of pecking and grinding, with shallow brown incisions and linear designs. The carvings are described in three parts as follows:

- CFKQM001-1: A composite motif consisting of four circles and one curved line.
- CFKQM001-2: A single symbolic pattern.
- CFKQM001-3: Contains four individual images, including two animals, one archer, and one unidentifiable figure.

The animals are relatively large, with upright ears, long necks, sturdy bodies, forelegs stepping forward, and long, downward-hanging tails; they are interpreted as horses. The archer is positioned beneath one of the horse images, holding an arrow in the left hand and drawing a bow with the right; the bowstring appears to be about to release, and the

legs are staggered, as if in motion. Above the animal on the right is an unidentifiable motif (Figure 36).

CFKQM002: Six individual motifs were recorded, including four human figures and two animals. The rock face faces southeast. The petroglyphs were created using pecking and grinding, with shallow brown incisions in both linear and silhouette styles. The four human figures surround a large central animal, with the figures at the lower left and upper left holding bows and arrows aimed at the animal in front of them. This animal has a long snout, antlers, a streamlined and sturdy body, straight forelegs and a relatively short tail, and is interpreted as a deer based on its morphological features. Below this deer is another animal, likely a sheep (Figure 37).

**2.14 Area 14: Yongxin Village Office Back Ridge Site**

This site belongs to Yongxing Village, Zhirui Town, Hexigten Banner, located northwest of the Village Committee, at 43°00' N, 117°55' E, with an elevation ranging between 1,010–1,050 m, approximately 3.6 km directly south of the Heluo Gully Site. The petroglyphs are distributed on the cliff faces of the Village Office Back Ridge. Four petroglyph panels were surveyed and recorded, numbered CFKQN001–N004. Fragments of pottery, stone tools, and Liao Dynasty ceramics were found near the hillside. The following provides a detailed description of these petroglyphs.

CFKQN001: This panel contains 20 individual motifs, including 11 animals, 2 bowmen, 1 rider, and 6 unidentifiable motifs. All motifs face southeast. The technique is pecking, with brown incisions in a line-style representation. Due to the large scale of the panel, the description is divided into CFKQN001-1 to CFKQN001-4. Most of the 11 animal figures have paired horns, slender bodies and upward-curving tails, resembling the common sheep depictions in northern Chinese rock art; therefore, the majority of these animals are interpreted as sheep, though some may be deer. The two bowmen are located in CFKQN001-2 and CFKQN001-4, both with elongated lines extending from their heads,

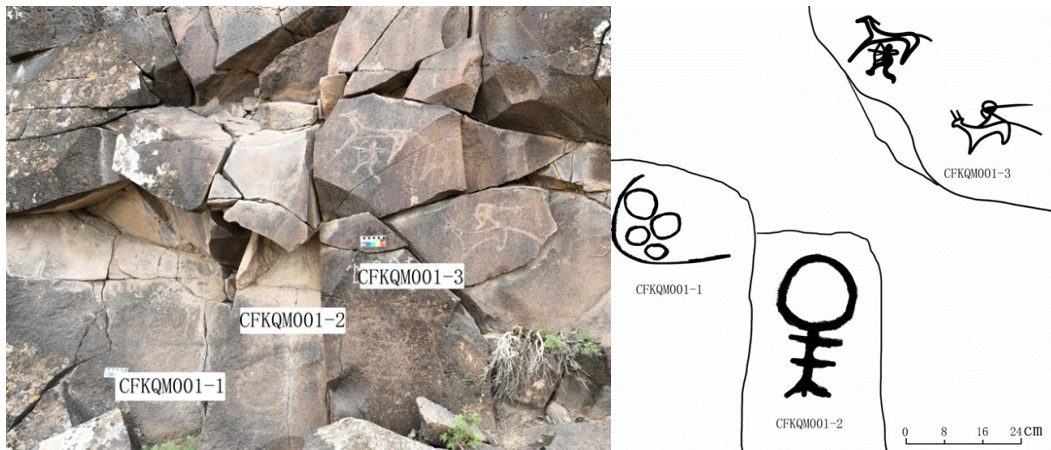


Figure 36 CFKQM001



Figure 37 CFKQM002

possibly representing hats worn by hunters. One bowman holds the bow with the left hand, the other with the right hand. The rider appears in CFKQN001-1 on the left side, holding a rein in the right hand and raising the left hand. Some motifs could not be identified (Figure 38).

CFKQN002: This panel contains one individual motif, depicting a deer. The rock surface faces southeast. The technique is pecking, with brown incisions in line-style representation. The deer's antlers curve outward with multiple branches. The body features numerous densely pecked small pits, likely intended to represent spots on the deer's body (Figure 39).

CFKQN003: This panel contains 4 individual motifs, all depicting animals. The rock surface faces southeast. The technique is pecking, with brown incisions in line-style representation. The forms of the four animals are similar to the sheep depicted in CFKQN001, and are therefore inferred to be sheep (Figure 40).

CFKQN004: This panel contains 1 individual motif, which is unidentifiable. The rock surface faces southeast. The technique is pecking, with brown incisions in line-style representation. The motif cannot be confirmed, but it is tentatively suggested that it is a fragment of an animal's body (Figure 41).

### 2.15 Area 15: Nailin Gully Site

This site is located in Nailin Gully, 750 m southwest of the Yongxing Village Committee, Zhizhuo Town, Hexigten Banner, at 43°00' N, 117°55'

E, with an elevation of 1,013 m. The petroglyphs are distributed on rock faces along the mid-slope. Two petroglyph panels were surveyed and recorded, numbered CFKQP001-P002, which are approximately 100 m apart. The following sections provide a detailed description of each panel.

CFKQP001: Four individual motifs were recorded, all depicting animals. The rock surface faces southeast. The petroglyphs were created using a combination of pecking and grinding techniques, with brown engraving marks and silhouetted forms. Each animal's head features curved, extending lines—some with multiple branches. The bodies are sturdy, and the tails curve upward. Based on these characteristics, the four animals are identified as deer (Figure 42).

CFKQP002: Two individual motifs were recorded, both depicting animals. The rock surface faces southeast. The petroglyphs were made by pecking and grinding, with brown engraving marks and silhouetted forms. Both animals have branched, elongated antlers; based on their morphological features, they are identified as deer (Figure 43).

### 2.16 Area 16: Dongzi Site

This site is located in the Dongzizu of Yongxing Village, Zhirui Town, Hexigten Banner, at 42°59' N, 117°55' E, with an elevation of 980 m. It lies 1.2 km southeast of Yongxing Village and approximately 1 km south of the Dongzizu. The petroglyph is distributed on the cliff face of the second terrace of the mountain on the north side of the Baicha River channel.

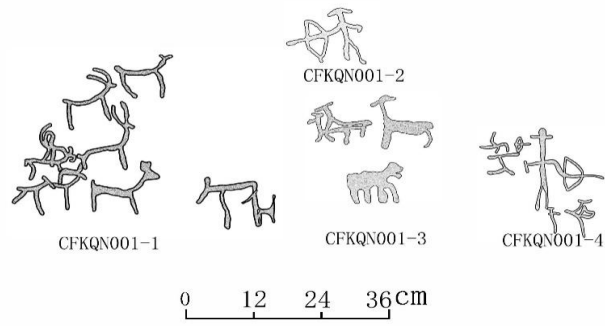


Figure 38 CFKQN001



Figure 39 CFKQN002



Figure 40 CFKQN003

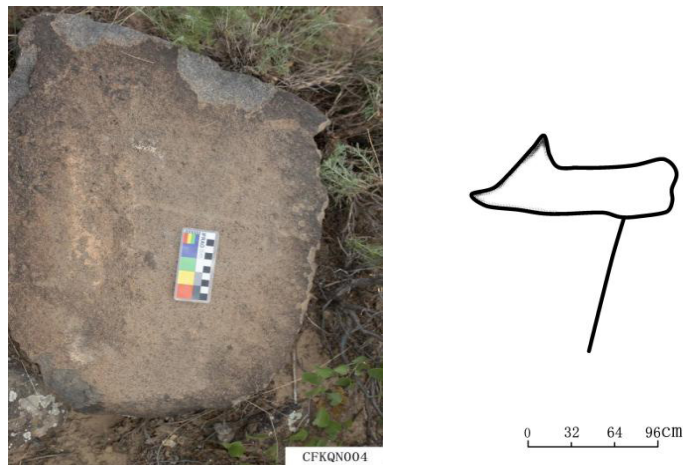


Figure 41 CFKQN004



Figure 42 CFKQP001



Figure 43 CFKQP002

One petroglyph panel was recorded, numbered CFKQQ001. The details are described below.

CFKQQ001: Eleven individual motifs were recorded, all depicting animals. The rock surface faces southwest. The images were created using a combination of pecking and grinding techniques, with light brown engraving marks. Both silhouette and linear styles are represented. At the center of the composition, two animals have zigzag patterns on their bodies, which suggest that they are tigers or other large felines. In the lower right, a deer rendered in silhouette style has its head raised and antlers long and branching, giving it an elegant posture. Above the predatory animals, there appears to be another deer. The remaining figures depict sheep (Figure 44).

### 3. CONCLUSION

#### 3.1 Characteristics of the Rock Art Content

Sixteen rock art sites were surveyed along the Baicha River Basin, proceeding from north to south and following the river downstream. A total of 42 panels were recorded, containing 266 individual motifs. The rock art motifs documented in this study primarily include animals, human figures, geometric shapes, anthropomorphic faces, patterns, concentric circles, symbols, and handprints. Some motifs are too eroded or indistinct to be identified and are therefore classified as unidentifiable rock art for statistical purposes (Figure 45). Among these, the petroglyphs at Gelaoyingzi and Goumenzu sites are the most densely distributed.

From the perspective of subject matter, the rock art of the Baicha River Basin primarily depict animals, often as a single motif or as groups of animals. Individual motif figures account for 57% of all images (Figure 46), with deer overwhelmingly dominating this category—representing 63% of all animal depictions. Deer appear at every site surveyed. They are

rendered with vivid and expressive detail, showing consistent stylistic and morphological features: slender and branching antlers, robust yet graceful bodies, smooth, flowing abdominal lines, and short upturned tails. Some deer stand still, while others are shown in dynamic postures of running or leaping. These images reflect the ancient inhabitants' keen observation of deer and indicate that the image of the deer has become deeply integrated into their daily life and symbolic world. In addition to deer, depictions of sheep, horses, camels, and predatory beasts are also present, with sheep being second only to deer in number, accounting for 19% of all animal figures.

Human figures constitute another important component of the rock art in the Baicha River Basin, second only to animal motifs, accounting for 18% of all individual images (Figure 46). The representations include standing figures, dancers, archers, and riders. In some panels, human and animal figures appear together, forming vivid scenes of hunting, herding, and daily life.

Geometric rock art, including circular, square, and triangular forms, account for approximately 9% of all individual motifs. Anthropomorphic face motifs make up only 4% (Figure 46). Although few in number, they display distinctive stylistic features and can be divided into two types—those with clearly outlined facial contours and those without. Some of the faces with contours are adorned with headdresses or facial decorations. In addition to these types, the Baicha River rock art also feature concentric circles, handprints, and house-like patterns.

Overall, the rock art of the Baicha River Basin displays a relatively wide variety of themes, with a particular emphasis on depictions of animals—especially deer. Most of these representations feature individual animals or herds, while scenes of hunting and herding are comparatively rare, with only four and three examples, respectively. Human figures, on the other hand, are more often found in scenes depicting daily life. For instance, in one painted composition from Yushunguang, the figures are shown driving livestock, dancing, leading animals by hand, or simply standing—vividly illustrating moments from everyday life. These

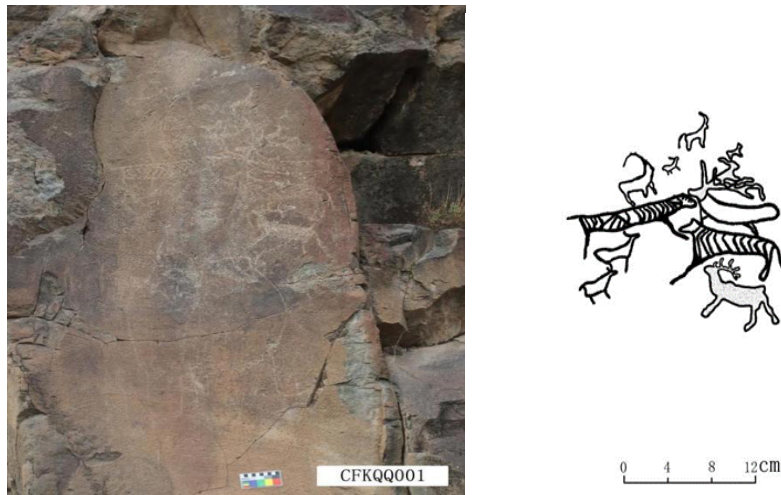


Figure 44 CFKQQ001

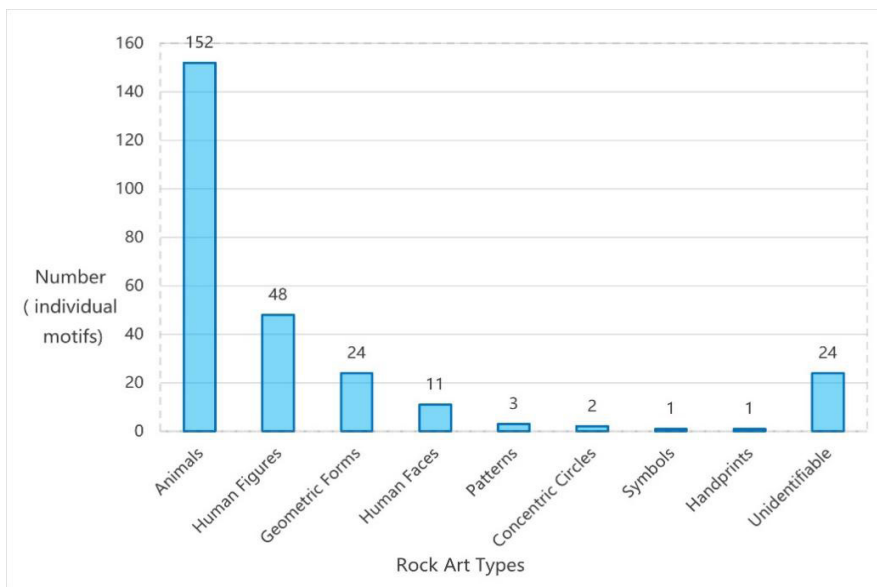


Figure 45 Types and Frequencies of Rock Art in the Baicha River Basin

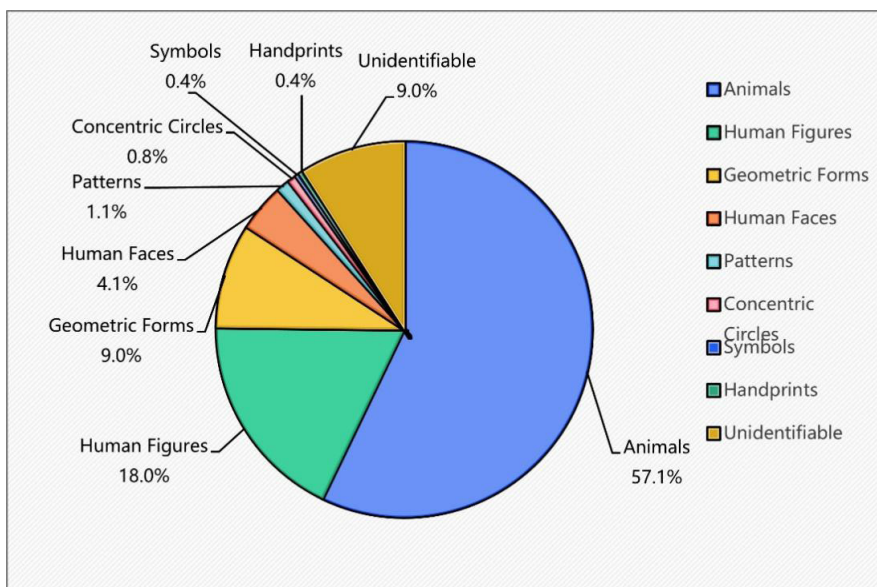


Figure 46 Proportional Distribution of Rock Art Types in the Baicha River Basin

characteristics differ markedly from those of other rock art sites in Inner Mongolia and even across northern China, endowing the Baicha River Basin rock art with a distinctive and unique cultural value.

### 3.2 Techniques of Production

The rock art in the Baicha River Basin are created using carving, grinding, and painting, with carving and grinding as the dominant techniques, often employed in combination. A distinctive feature is that the bodies of animals are frequently ground, but only lightly on the surface. Since most of the rocks are black basalt, even simple grinding allows the images to stand out clearly. The painting technique is used only at the Yushunguang site, where the petroglyphs are rendered with red pigment. In some images, the outlines are first carved and then filled with color, a technique rarely seen elsewhere in China. Petroglyphs of varying techniques and levels of detail coexist within the same area, possibly reflecting differences in production periods, cultural groups, or tools used, which warrants further research.

### 3.3 Discussion on the Chronology of the Rock Art

Based on currently available archaeological excavation data, human activity in the Hexigten region can be traced back to the Xinglongwa Culture, approximately 8,000 years ago. At the Baiyinchanghan site in Linxi County, on the northern bank of the Xilamulun River, remains of the Xinglongwa Culture have been discovered, including shell ornaments carved into human faces, featuring two round perforations at the top and one at the bottom. The Baiyinchanghan site is located only 13 km from the Gelaoyingzi rock art site in the Baicha River area. Although the forms of human face depictions differ between the two sites, they are closely related. Additionally, two small ceramic anthropomorphic figurines were unearthed in a Xinglongwa Culture burial at Honggelitu, Bairin You Banner (*Balin You Qi*) (Figure 47). At the Shanquan rock art site in Baicha River, one human face painting has been lost (Figure 48); yet its design is highly similar to these two ceramic figurines. While it cannot yet be asserted that this rock art dates precisely to the Xinglongwa period, the strong resemblance suggests a significant connection. Regarding human face rock art without clear outlines, one such example was documented at CFKQA006 in the Gelaoyingzi site. This type of depiction is comparable

to the Kamenka (*Каменка*) type human faces found along the lower Angara River in Russia, which have been dated as early as 4,000–3,000 BCE (Zaika, 2012). Therefore, it is possible that some human face rock art in the Baicha River area may date back 6,000–8,000 years.

The ecological environment and subsistence patterns in northern China underwent a gradual process of transformation. From around 4,000 years ago, animal husbandry began to develop in northern China, and by approximately 3,000 years ago, it had gradually become the predominant mode of subsistence (Wei & Feng, 2020). However, hunting still accounted for a significant proportion of the subsistence structure at that time. The emergence of pastoral economies involved the domestication of animals. According to recent research, domesticated sheep appeared in the Gan-Qing region around 5,600–5,000 years ago; domesticated cattle first appeared in the Gan-Qing and northeastern regions around 5,500–5,000 years ago; and domesticated horses emerged in the Gan-Qing and northeastern regions around 3,800 years ago (Yuan, 2010; Yuan, 2015; Lü et al., 2019). Therefore, the rock art depicting animals such as horses and sheep should date to the period following the onset of pastoralism.

Alongside the development of pastoralism, animal patterns emerged and became popular decorative themes on bronzes in northern China. Horses, sheep, and deer frequently appear in bronze ornamentation from the Shang and Zhou periods, with deer being particularly prominent. In rock art, the depiction of deer places emphasis on the antlers, which are generally large and highly branched; in some cases, the length of the antler branches is nearly equal to that of the deer's body. These characteristics are consistent with the stylistic features of deer motifs widely distributed across the Eurasian steppes. Accordingly, the majority of animal rock art in the Baicha River Basin should date to the Chinese Bronze Age, with the initial phase roughly around 3,800 years ago.

Moreover, depictions of sheep, horses, and cattle frequently appear together within a single rock art panel. Associated motifs, such as pastoral scenes, hunting scenes, riders, and handlers leading horses, can be considered relatively standardized "artifact assemblages". These motif types are contemporaneous with the animal rock art and are generally dated to the Bronze Age.

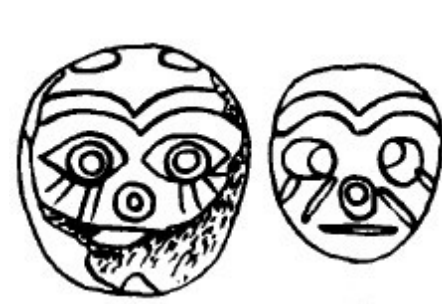


Figure 47 Xinglongwa Culture Ceramic Figurines of Human Faces (Tian, 2004)



Figure 48 Shanqian Human Faces Petroglyph

## ACKNOWLEDGEMENT

This paper presents the research findings of the 2025 project (Approval No. 2025HQ004) "Survey and Study of Rock Art in the Western Liao River Basin," conducted under the Research Base for Hongshan Culture and Khitan Liao Culture. This research was supported by the Doctoral Scientific Research and Innovation Development Fund of Chifeng University (Approval No. BSJJ095). The survey was carried out as part of an extensive collaboration between Chifeng University and the Hexigten Banner Party Committee and local government. The field survey was led by Wenjing Zhang, Associate Professor at the School of History and Culture of Chifeng University and Vice President of the China Rock Art Division. The core research team brought together expertise from multiple disciplines, including Professor Xiaokun Wang from the Archaeology & Museum Studies at Renmin University of China, Professor Qian Zhao from the New Media Imaging Program of the School of Arts at Renmin University of China, graduate students Jianmeng Liu, Kaixin Huo, Qiyuan Gai, and Xiaoyu Ou from the School of History and Cultural Heritage, Chifeng University, Cultural Relics and Museology Program, as well as Sa Renqimuge from the Hexigten Banner Museum. Throughout the entire survey, leaders and colleagues from the Hexigten Banner Party Committee, local government, Bureau of Culture and Tourism, and the museum provided comprehensive support and close coordination, offering a solid foundation for the smooth progress of the survey.

## ANNOTATION

Note 1: References: Official website of the People's Government of Hexigten Banner, Chifeng, China: <http://www.kskt.gov.cn/>; Lianyuan You and Jingchun Yang. Landforms of China. Beijing: Science Press, 2016, 579-598.; Zheng, Du, ed. General Introduction to Physical Geography of China. Beijing: Science Press, 2016, 109-115.; Changming Liu. Hydrogeography of China. Beijing: Science Press, 2014, 488-489.

## REFERENCES

- Han, L. X. (2004). Rock art of Hexigten Banner, Inner Mongolia. *Inner Mongolia Cultural Relics and Archaeology*, 1(1).
- Han, L. X. (2013). Rock art of Hexigten Banner. Inner Mongolia Culture Press.
- Hexigten Banner Local Gazetteer Compilation Committee. (1993). Cultural relics gazetteer of Hexigten Banner. Inner Mongolia People's Publishing House.

- Kang, Q. Y. (Compiler). (1929). Jingpeng County gazetteer of Rehe Province.
- Lü, P., Luo, Y., & Yuan, J. (2019). Constructing a disciplinary system of zooarchaeology with Chinese characteristics, Chinese style, and Chinese manner. *China Cultural Relics News*, December 6.
- Ren, X. H. (2003). A preliminary study of the Baicha River rock art assemblage in Chifeng. *Journal of Chifeng University*, 1(1).
- Sun, J. M. (1994). A brief account of rock art in Hexigten Banner. *Steppe Cultural Relics*, 1(1).
- Sun, X. Y. (2020). A study of anthropomorphic face motifs in the West Liao River Basin. The Ethnic Publishing House.
- Tian, G. L. (2004). A survey of ancient rock art in the middle and lower reaches of the Yin River, Chifeng, Inner Mongolia. *Archaeology*, 12(12).
- Wei, J., & Feng, B. (2020). Reflections on the integration of farming and animal husbandry and the origin and development of animal husbandry in Northern China. *Western Regions Studies*, 4(4).
- Yuan, J. (2010). A zooarchaeological study of domesticated animals in ancient China. *Quaternary Sciences*, 2(2).
- Yuan, J. (2015). *Zooarchaeology of China*. Cultural Relics Press.
- Zaika, A. L. (2012). Face images in Lower Angara rock art. *Archaeology, Ethnology & Anthropology of Eurasia*, 40(1), 62-75.
- Zhang, S. B. (1998a). Newly discovered ancient rock art in Chifeng City. *Inner Mongolia Cultural Relics and Archaeology*, 2(2).
- Zhang, S. B. (1998b). Anthropomorphic rock art along both banks of the Baicha River in Chifeng. *Inner Mongolia Cultural Relics and Archaeology*, 2(2).
- Zhang, S. B., & Liu, Z. Y. (1984). A survey of rock art in the Baicha River Basin, Inner Mongolia. *Cultural Relics (Wenwu)*, 2(2).
- Zhao, G. D. (1992). Two newly discovered rock art sites in the Chifeng region. *Inner Mongolia Cultural Relics and Archaeology (Steppe Cultural Relics)*, 12(12).
- Zhou, Y. S. H., & Wu, J. C. (2022). Rock art of Chifeng. Beijing Science Press.