



KEYWORDS: *Pha Taem rock art – Cangyuan rock art – Dating – Cultural connection*

ON THE RELATIONSHIP BETWEEN THE CANGYUAN ROCK ART IN YUNNAN, CHINA, AND THE PHA TAEM ROCK ART IN LAOS

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Abstract. The Pha Taem rock art is located on a cliff at a bank of the Ou River in Laos. It can be divided into eight groups with more than 300 images, including hand prints, anthropomorphs, zoomorphs, 'boats' and geometric symbols, and all of them are drawn with red pigment. Among them, the number of hand prints is the largest, accounting for more than half of the total number of images. Researchers believe that the rock art is about 4000 years old. However, after analysing and comparing the corpus with the surrounding areas, especially the materials in Yunnan Province, China, we find that the date of the rock art should be around 2000 years BP, about the middle and late Western Han Dynasty in China, falling within the range of the age of the Cangyuan rock art (Warring States to the Eastern Han Dynasty, 475 BCE–220 CE). From the aspects of their environments, contents and rock art site names, the Pha Taem rock art shares many similarities with the Cangyuan rock art, indicating that there may be some cultural connections between the ethnic groups who painted them.

In 2018, the article *The cliff paintings of Pha Taem, Luang Prabang, Lao PDR* by Noel Hidalgo Tan was published in *Rock Art Research*. It presented a detailed introduction to the Pha Taem rock art and discussed its chronological issues (Tan 2018a). The rock art site is located on a cliff at the shore of the Ou River in Luang Prabang, northern Laos. There are more than 300 images, all of them are drawn with red pigment, including hand prints, anthropomorphs, zoomorphs, 'boats', geometric symbols and motifs providing no pareidolic 'identification clues'. Zoomorphs include 'monkeys' (Tan called them 'dogs'), 'buffaloes', 'zebus' (Tan thought that all the bovines were water buffaloes, but this author suggests that some images are zebus), 'elephants' and others. The rock art site is only accessible by boat. Its orientation is southeast, and all the images are located 5 to 11 m above the water surface, so it is impossible to observe them at a close distance. There is a lowland area on the opposite bank of the rock art site which Tan believes may have been a hunting ground.

Similar images were also found in the Pak Ou Caves (Tan 2018b). They are located near the confluence of the Ou and Mekong Rivers (i.e. Lancang River in Chinese) and share numerous points of similarity with Pha Taem. Both of them are red rock paintings situated on a cliff face overlooking a river, and duplicate motifs found in them include hand prints, 'domesticated buffalo' and anthropomorphous forms with similar

arm poses (Tan 2018a: 75). There is also a terrace on the opposite bank of the rock art site. Tan described the rock art bodies as a site cluster (Tan 2019: 131). This rock art site is significant because it is located on the Mekong River communication line between the Pha Taem and the Cangyuan rock art sites.

Also, Tan noticed that there are some similarities in motifs between the rock art in Yunnan with that of northern Laos (Tan 2019: 129). Furthermore, there are also many similarities in the rock art traditions of southern China and mainland Southeast Asia. Tan thought there might be a Zomian painting tradition, and he tried to create a pan-Southeast Asian rock art database and apply a set of descriptive tags including landscape, motif types, and archaeological findings to identify patterns in rock art similarities (Tan 2018c). This Zomian rock art tradition has several shared characteristics found throughout the region: the red painting at cliff sites, often with hand prints and depictions of presumably domesticated animals, particularly bovines. Tan (2019: 129) suggests a connection to a Neolithic wave of expansion from southern China into Southeast Asia.

We will find that the Pha Taem rock art does share many similarities with the Cangyuan rock art in Yunnan Province. These similarities may indicate that there is a relationship between the authors of these rock art corpora, and perhaps even the same ethnic group could have drawn them at different times (Fig. 1).

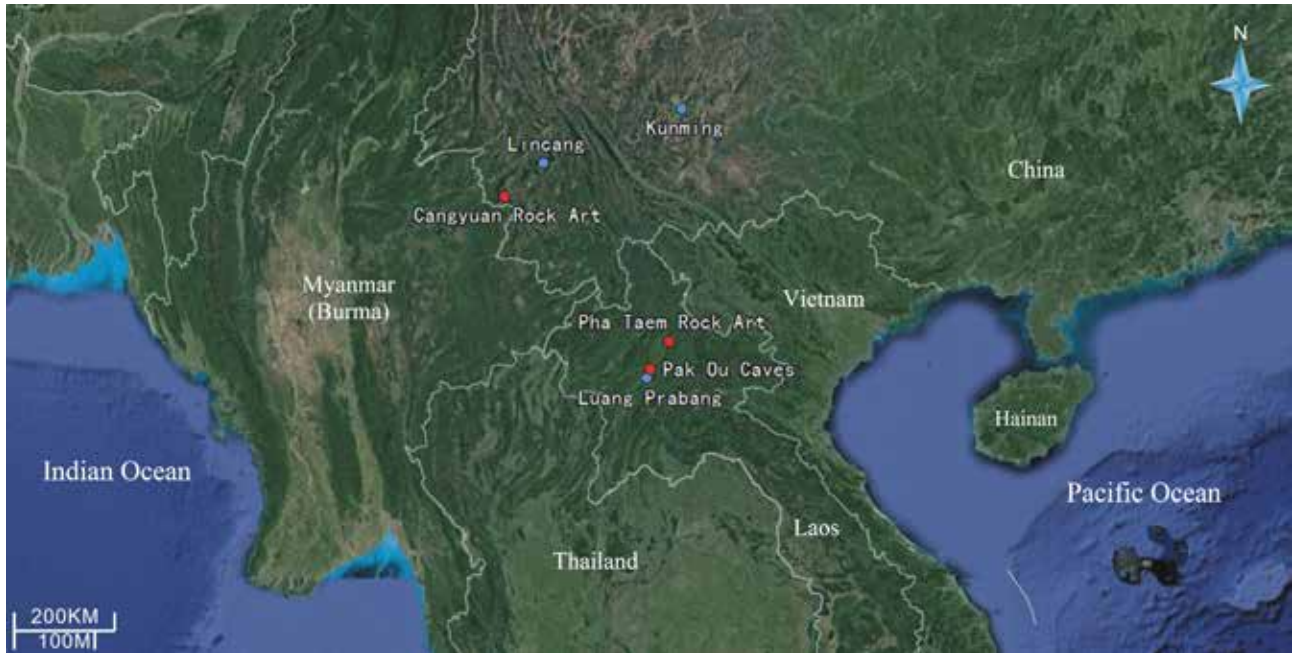


Figure 1. Location of the rock art sites, red dots (by XB). ©Google Earth. Note: the straight-line distance between the Pha Taem and the Cangyuan rock art sites is about 450 km, but the distance data are not very accurate because there are 17 sites in the Cangyuan rock art, and only one of them is selected to measure the distance between the two rock art sites. Also, the Pak Ou Caves in Luang Prabang has many similarities with them, so it is also marked on the map.

1. Introduction to the Cangyuan rock art

1.1 The locations of the rock art sites and their surrounding environment

The Cangyuan rock art site complex is located near the towns of Mengsheng, Menglai, Nuoliang and Mengjiao in the Cangyuan Wa Nationality Autonomous County of Lincang City, Yunnan Province, China. It is distributed along the Xiaohei River and its tributaries (including the Mengdong and Yong'an Rivers). It belongs to the Lancang River rock art system in Yunnan. This area is bordered by Gengma County in the north, by Shuangjiang River and Lancang River in the east, and by Myanmar Shan State in the west and south. The majority of inhabitants is the Wa people, accounting for about 90% of the population. Dai, Lahu and Han people also inhabit the area. The Cangyuan rock art is painted with red pigment on limestone cliff surfaces about 2–10 m above the ground. The cliff surfaces are 1000–2500 m above sea level. There is usually a platform (ground surface) with a capacity of 20–30 people below, which may have been used for holding ceremonies. The cliff surfaces where the rock art is located are generally smooth, and all the now well-preserved rock art sites are underneath boulders, having thus avoided erosion by rainwater.

1.2 Research history

The Cangyuan rock art was first reported by Wang Ningsheng in January 1965, when he investigated and recorded six rock art sites. During this investigation, he took a small piece of painted stone from the cliff near one of the rock art sites. He conducted a chemical analysis by the Chemistry Department of Kunming

Institute of Technology, proving that the main component of the pigment is iron, assuming that the pigment is haematite (Investigation Team of Yunnan Provincial Institute of History 1966: 15). The haematite should come from the local area because of the presence of haematite at the site Loc. 5. Subsequently, two other surveys were conducted in 1978 and 1981, and four new rock art sites were found (Wu 2003: 116). By 2017, 17 sites in Cangyuan had been discovered with more than 1200 figures of rock art, within an area of nearly 600 m² (Wu et al. 2019: 110). On 25 June 2001, the Cangyuan rock art was listed as a State Priority Protected Site by the State Council of China.

Scholars have different opinions about the age of Cangyuan rock art. Wang Ningsheng believed that its upper date could reach the Han Dynasty, and the lower date in the Ming Dynasty, that is, from the beginning of the first century to the 15th century CE, and its main part should have been drawn during the period of the Han and Tang Dynasties (Wang 1984: 81, 1985: 115). The Wang (1984) article is of particular significance as it is the first publication of Chinese rock art outside of China. Yang Tianyou considered that the rock art is of the late Neolithic, and it was drawn three thousand years ago (Yang 1986). Zeng Yalan estimated that all the rock art is of similar date as that of surrounding cave sites and that these cave art sites can be dated to the Palaeolithic or Neolithic era. Therefore, the date of the rock art is also the Palaeolithic or Neolithic era (Zeng 1997: 21–24). After comparing the Neolithic culture of Shifodong with Cangyuan rock art, Wu Xueming concluded that the date of rock art was about between 3000 to 5000 years (Wu 1989: 408). Yang Baokang compared

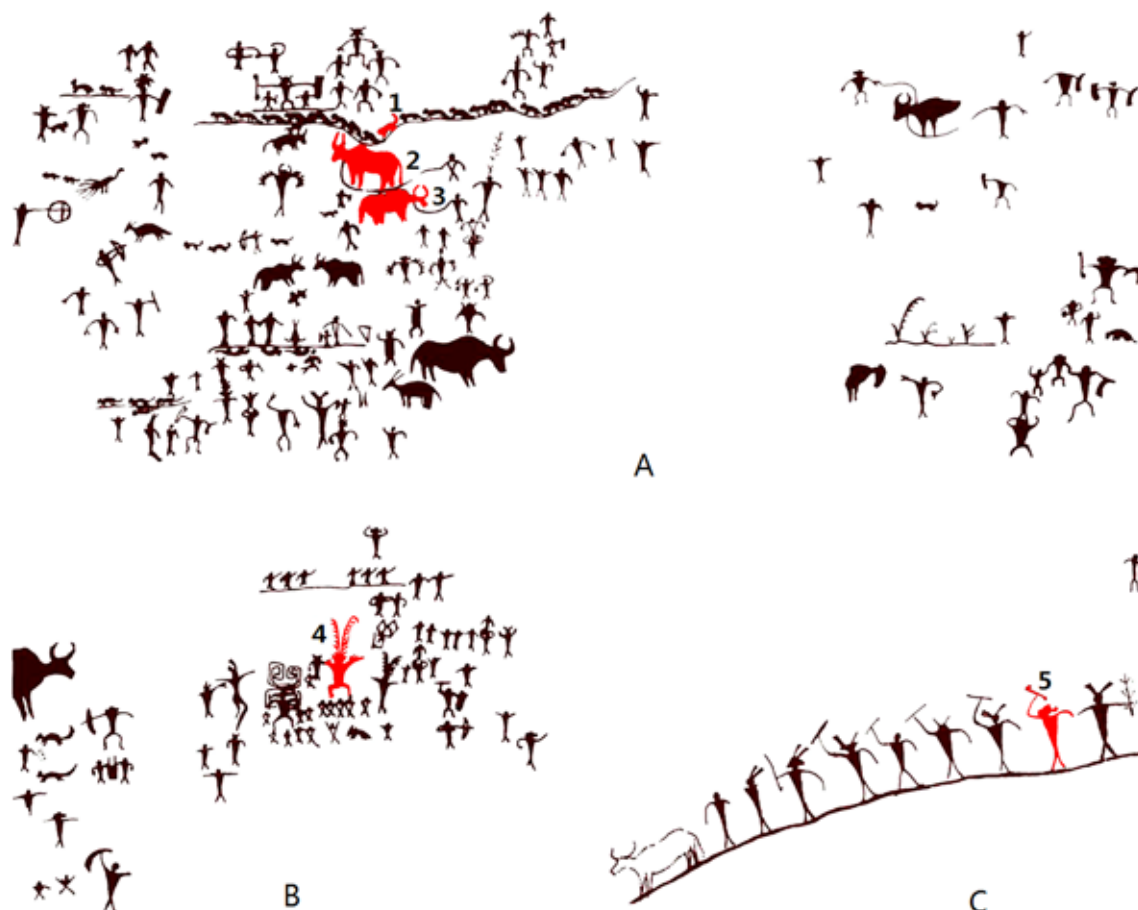


Figure 2. Part of the Cangyuan rock art: (A) and (B) Pa Dian Mu (also called 'Mampa') site (after Editorial Board of Complete Works of Chinese Art Classification 2007: 1, modified); (C) Yang De Hai site (after Editorial Board of Complete Works of Chinese Art Classification 2007: 84, modified). The images mentioned in this article are highlighted in red.

the Neolithic culture of Shifodong and the bronze drum and other images with the Cangyuan rock art and insisted that the date of the rock art was from the Shang Dynasty to the Eastern Han Dynasty, and the main part was from the change from the Shang and Zhou Dynasties to the late Western Han Dynasty (1046 BCE–8CE) (Yang 2002: 71). Qiu Zhonglun suggested that the authors of the Cangyuan rock art were the Dian Yue, Jiu Yue and Shan people, who were the ancestors of the local Dai people and lived there from the Warring States to the Eastern Han Dynasty (Qiu 1995: 32). Duan Shilin argued that the date of the Cangyuan rock art preceded the bronze drums, that is, earlier than the Warring States period (Duan 1997: 34).

Direct dating methods have also been applied to the study of Cangyuan rock art. In 1981, the Yunnan Provincial Museum sampled the stalactites covering the rock art at Loc. 3 of the Cangyuan rock art. The samples were radiocarbon dated by the Institute of Vertebrate Palaeontology and Palaeoanthropology, Chinese Academy of Sciences, and the result showed that the inner layer covering the painting was formed 3030 ± 70 years ago, earlier than the outer layer of the stalactites, which was formed 2300 ± 70 years ago (Wu et al. 2019: 110). However, it must be noted that stalactite samples are not ideal ^{14}C dating materials, because

the addition of 'dead carbon' during deposition could make the dating results older.

In 1984, Hu Yufan, Wu Xueming and Shi Punan extracted 216 samples of spores, pollen and diatom fossils from pigment of the Cangyuan rock art, and compared the sporopollen assemblage with the Blytt-Sernander North-European Postglacial climatic time and forest evolution stratification table. This suggested that the sporopollen assemblage in the Cangyuan rock art was dated to the Subboreal period, corresponding to the Bronze Age from 3500 to 2500 years ago (Hu et al. 1984: 15). However, due to different research conditions, the stage in the North-European Postglacial climatic time is not entirely consistent with the situation in Yunnan. Blytt-Sernander defined five climatic periods, but Chinese researchers adopted tripartite (early, middle and late Holocene) and quadripartite (ancient, early, middle and late Holocene) periodisations according to their characteristics (Xu 1989: 15). Even these periodisation methods are for the general conditions; in fact, the climatic periods of each specific region can be further divided. Also, according to the definition of The geological dictionary, the Subboreal period is from 4500 to 2000 years ago, or 5300 to 2300 years ago, and it is also inconsistent with Hu Yufan's dating (The Geological Dictionary Office of Ministry of Geology 2005: 344). It

is, therefore, necessary to use a variety of methods to verify each other in order to check these results.

1.3 Themes and contents

The Cangyuan rock art currently has more than 1000 subjectively identifiable images, including anthropomorphs, zoomorphs, other objects and geometric symbols. The content covers purported depictions of hunting, grazing, villages, wars, dances and so forth, and is supposedly related to religious beliefs. Zoomorphs include images believed pareidolically to depict cattle, horses, sheep, pigs, dogs, elephants, tigers, leopards, bears, deer, birds, monkeys, snakes and others. Objects include purported images of bows, horns, shields, spears, pestle and mortars, lassoes, wooden fences, 'pole-railing'-style houses, boats, and so forth (Fig. 2). Besides, there are also presumed celestial images such as the sun and the moon. Among them, most of the images are anthropomorphs, accounting for more than 70% of the total. All the anthropomorphs are tiny, of which the large ones have heights between 30 and 40 cm and the small ones less than 5 cm (Investigation Team of Yunnan Provincial Institute of History 1966: 8). Some anthropomorphs are decorated with 'feathers', 'horns' and 'tails', and others have 'male genitals'. According to Wang Ningsheng, these ancient artists painted the rock art by applying haematite pigment with hands, feathers or plant fibres (Wang 1985: 17-18).

2. Comparative study of the Pha Taem rock art and the Cangyuan rock art

The Pha Taem rock art and the Cangyuan rock art are both located in the Mekong River basin. The areas are difficult to access, and the waterway is one of the most important ways for local people to travel. The distance between the two rock art concentrations is about 450 km, but for the ancients who migrated along the waterway, the distance was not particularly great. In considering the many similarities between the rock art corpora, we see, first, that both of them are painted on vertical cliffs in the open air. Both of them are chosen to be drawn on the relatively wide and flat cliffs slightly tilted from top to bottom. There is often a jutting stone eave above the cliff wall of the Cangyuan rock art to avoid rainwater erosion, and it is unclear at present whether the Pha Taem rock art site is under such eaves.

Second, the sites are in both cases located in inaccessible mountain terrain that is dissected by deep valleys. In both cases, they are close to rivers or streams. The difference is that the Pha Taem (and also Pak Ou Caves) rock art is located directly above the water with no platform beneath the paintings, but the Cangyuan rock art usually has a platform beneath where people can congregate. We know that in the Zuojiang River rock art of Guangxi, there are 80 sites; 72 of them are distributed on the riverside cliffs (as in Pha Taem), and eight sites are 2.5 to 12 km away from the nearest river bank. All of the rock art sites had the same riverside locations at the time they were painted,

but due to the changes of climatic, hydrological and geomorphological conditions, some rock art locations are now further away from the rivers than others (Xu 1988: 91). Therefore, it is necessary to study further whether the environment of the Cangyuan rock art sites has changed since they were created.

Third, the Cangyuan rock art is located in the Mekong River basin, and the Pha Taem rock art is located on the Ou River, a tributary of the Mekong River. People could travel between them by boat. There may be several stages of cultural transfer by boat travel, and Pak Ou Caves may indicate such transfer. Therefore, it could be speculated that if we looked carefully along the waterway between the two rock art occurrences, we might discover more similar rock art.

Fourth, images at both sites are drawn with red pigment. The pigment of the Cangyuan rock art has been proved to be a mixture of haematite powder and animal blood, while that of the Pha Taem rock art is also mixed of haematite and binders, but the nature of the binder remains unclear. The colour of the Cangyuan rock art is generally darker, reddish-brown, while the Pha Taem rock art is mostly in bright red and the number of brown rock paintings is small.

Fifth, the painting techniques are the same. The rock paintings were in both cases made by the single-colour flat-painted silhouette method to represent all objects. Anthropomorphs and zoomorphs in the picture are only displayed in outlines, whereas facial features are rarely depicted, and the colour shading of each image is the same. The limbs of the anthropomorphs are emphasised, and human movements, behaviours and status appear to be represented through different postures of the limbs. As for zoomorphs, their ears, limbs, horns, tails and other parts of the bodies are highlighted.

Sixth, from the linguistic point of view, the first recorded site of the Cangyuan rock art is called Pa Dian Mu ('cliff with paintings' in the Dai language) by the locals (Investigation Team of Yunnan Provincial Institute of History 1966: 9). The rock art in northern Laos is called 'Pha Taem'. In the Thai language, 'pha' means cliff, 'taem' means paintings (pers. comm. Merika Sanguanwong, archaeologist, Regional Office of Fine Arts Department, Ubonratchathani, Thailand), and 'Pha Taem' also means 'cliff with paintings' or 'mountain with paintings'. It could imply that ancestors of the Thai and the Dai people had already shared the same name of these rock art sites before they separated from each other.

In addition to the above points, there are still many similarities in the contents and subjects of the two rock art bodies. They are indicated in the following aspects.

Hand prints and stencils are the most numerous motifs in the Pha Taem rock art, accounting for about half of the total images. Most of them were made by the imprinting technique, and a few by the stencil method. In the former, the hand is painted with red pigment and then imprinted directly on the rock surface. In the

stencil technique, the hand is pressed against the rock surface, and the paint is sprayed around it. This leaves a stencil image of the hand on the rock surface, which is very popular in the Pak Ou Caves.

In the Cangyuan rock art and its neighbouring Gengma rock art, several hand images of both these methods occur (Fig. 3). According to Chinese scholars, the ancient Yue and Luo Yue people distributed in the vast areas of southern China had a tradition of revering the palms of their hands. Palms are either carved or painted, and their images often appear on high cliffs, which were called 'xianzhang' ('palms of immortals') in the literature (Shi 1982: 195). In the ox-slaughtering ceremony of the Wa people, hand prints are usually placed on the chest, back and arms of the men who slaughter the ox, and the ritual significance is apparent (Fig. 5).

'Elephant' images were found in both sites, but their number is minimal. In general, the 'elephants' in the Pha Taem rock art are easy to identify because they are very concrete (Tan 2018a: Fig. 6, No. 45). However, those in Cangyuan rock art are abstract; most of them are expressed in a highly stylised way. In general, they can only be judged by the 'trunk' (Wang 1985: 81).

'Ox-slaughtering' and 'ox-chopping' images: the 'slaughtering' refers to the use of javelins or spears to kill oxen, while 'chopping' refers to the use of axes or choppers to do so. In the Pha Taem and the Cangyuan rock art corpora, there are several potential images of 'slaughtering' and 'chopping oxen'. At Pha Taem, one set of images consists of three single images, including two anthropomorphs and one bovid (Tan 2018a: Fig. 6, Nos 5, 6 and figure between them). There are also some images like this in Cangyuan rock art (Deng 2004: 37, 39). There are other potential 'ox-slaughtering' images found in the Pha Taem rock art (Tan 2018a: Fig. 6, Nos 22-24). Tan believes that these images are of a buffalo attacked by two people using blowpipes (Tan 2018a: 70). There is also a 'person' in front 'leading' a bovid with what I believe is a rope tied at the neck instead of the nose. The other person at the rear is armed with a 'javelin' 'attacking' the 'ox'. Besides, similar images were also found in the Pak Ou Caves (Tan 2018a: Fig. 15, No. 1 and figures to its right). Tan believes that these images might reflect a domestication and hunting scene, but in my opinion, it may be a reflection of a 'ox-slaughtering' or

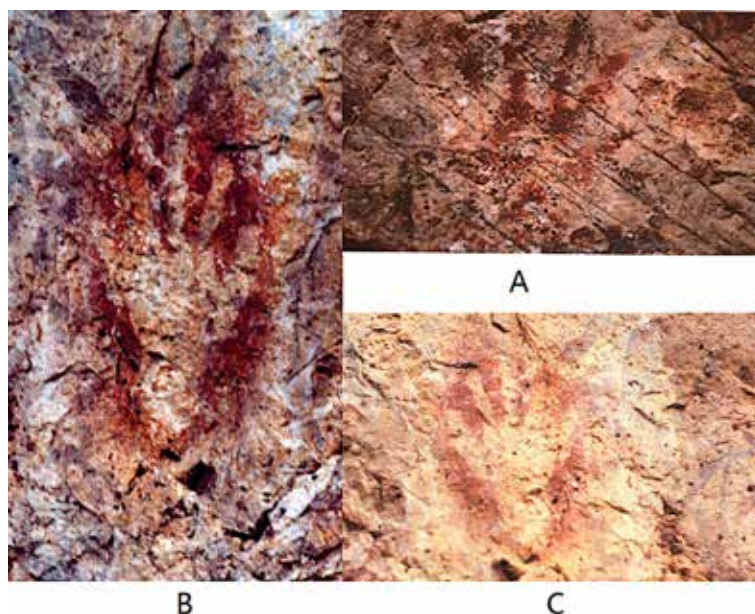


Figure 3. Hand prints in the Cangyuan and neighbouring rock art: (A) and (B) Gengma rock art (after Deng 2004: Fig. 134; Editorial Board of Complete Works of Chinese Art Classification 2007: Fig. 91); (C) Cangyuan rock art (after Editorial Board of Complete Works of Chinese Art Classification 2007: Fig. 48). (A) is made by the imprinting technique, (B) and (C) are created by the stencil technique.

'ox-chopping' sacrifice scene. Similar images are also found in the Cangyuan rock art in Yunnan (Fig. 4).

Four similar images were found at Meng Sheng (also called Rang Dianmu) site of the Cangyuan rock art. One of the images depicts two 'humans' standing

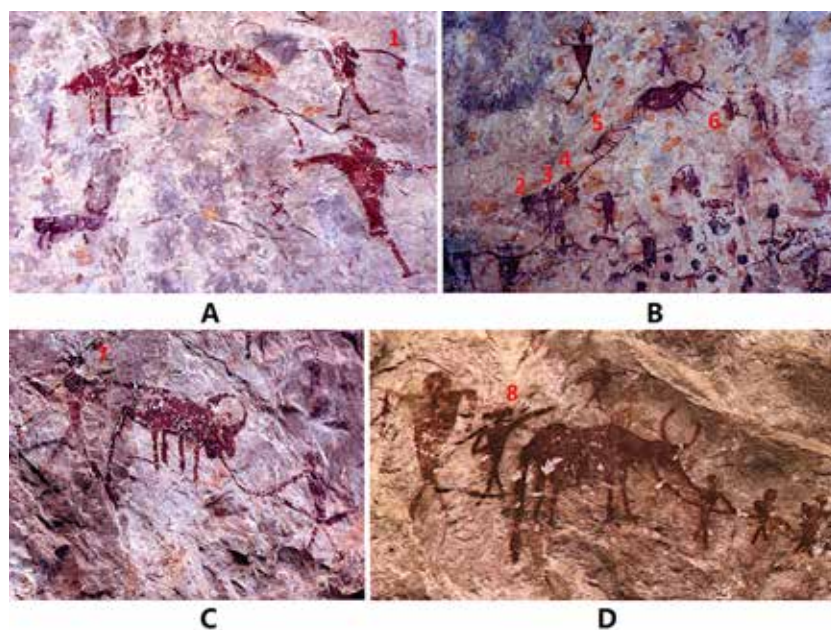


Figure 4. 'Ox-slaughtering' and 'ox-chopping' images in the Meng Sheng (also called Rang Dianmu) site of the Cangyuan rock art: (A) 'ox-chopping' (after Editorial Board of Complete Works of Chinese Art Classification 2007: Fig. 65, modified); (B) and (C) 'ox-slaughtering' (after Editorial Board of Complete Works of Chinese Art Classification 2007: Figs 60 and 66, modified); (D) 'ox-slaughtering' (after Deng 2004: Fig. 98, modified).



Figure 5. Ox-slaughtering ritual of the Wa people: (A) preparations; (B) ox-slaughter (both after http://bbs.zol.com.cn/dcbbs/d17_20805.html).



Figure 6. 'Monkey climbing' image in the Mankan 2 site of the Cangyuan rock art (after Deng 2004: Fig. 75).

in front of a bovid. One of them leads the so-called ox by the neck and the other 'hits it' with a stick-like object. My pareidolic interpretation suggests that the object looks like a long-shaft axe and may be used to decapitate oxen (Fig. 4, No. 1). Many similar long-shaft axes were unearthed at the Yang Futou cemetery in Kunming, Yunnan (Yunnan Institute of Cultural Relics and Archaeology 2001: 36–39). The second image is akin to the previous image. There are also two 'people' standing in front of the 'ox'. One of these 'leads' the 'ox' by the neck and the other hits the head of the 'ox' with a 'weapon', but the form of the 'weapon' is unclear (Fig. 4, No. 6). The third image depicts a 'person' 'leading' the 'ox' by the neck, and the other 'person' tries to hit the back of the 'ox' with a 'javelin' (Fig. 4, No. 7). The

fourth image depicts three people standing in front of the ox. Two of them hold the 'rope' at the neck, and the 'person' near the 'ox' holds its head with the other hand. Two 'people' stand behind the 'ox' and the person near the 'ox' hits the back of the 'ox' with a 'javelin' (Fig. 4, No. 8).

The ox-slaughtering ritual is still practised by the Wa people of Yunnan (Fig. 5). It is called *suad moi* in the Wa language,

which refers explicitly to stabbing oxen to death with a spear. This custom also exists in the Lisu, Dulong, Hani and other ethnic groups (Feng et al. 2012: 59). Generally speaking, in Wa society, any important activity requires ox-slaughtering. Before 1949, the main procedure of the ox-slaughtering activity was as follows: the shaman worshipped the heaven and the earth; sang and danced; tied the ox; ox-slaughter; the shaman worshipped the ox; brave and strong men chopped the head and tail off the ox; followed by respectful offer of the ox head (Feng et al. 2012: 60). The participants of the ox-slaughtering ritual activities included the village leader, *moba* (shaman), the priest, ox-slaughtering men and all of the villagers. There are also special considerations in the choice of sacrifice cattle. In the significant festivals, yellow cattle are usually used, but there are often several water buffaloes slaughtered at the same time (Feng et al. 2012: 60). At the beginning of the ceremony, the priest led the oxen to turn clockwise around the house three times, and then the ox was tied on the pole. After that, all the villagers sang and danced around the ox. After the village leader signalled the wizard to start, the wizard and ox-slaughtering men started dancing to the sound of a wooden drum. Then an ox-slaughtering man darted a spear at the ox between the chuck and the ribs (Feng 2012: 178). If the ox did not fall, the other man followed with the same action, continued to stab into the same part until the ox fell. Subsequently, one person cut the oxtail with a knife, and all adult males in the village took it as a signal, swarming up and butchering beef with knives. Now, the ox-slaughtering procedure has been greatly simplified.

The custom of ox-chopping is mainly used in funerary ceremonies. It still exists in the ethnic groups of the Miao, Buyi, Yao, Shui and Jingpo in the border areas of Yunnan, Guizhou and Guangxi provinces (Wu 2016: 129). The tools used in the ox-chopping ritual are mostly long-handled knives, and axes have nearly disappeared.

'Monkey climbing' images. In the Cangyuan rock art, there are a large number of 'monkey' motifs 'crawling' or 'running' along the slopes or grounds, and the 'monkey' motif features in one picture are particularly salient (Fig. 6). As I have pointed out earlier, the monkey tails usually change during the climbing process.

The tails are drooping when standing on the flat ground or climbing up a slope, while on the downhill, the tails are upturned. Also, the monkey motifs in the Cangyuan rock art include those of short tail and long tail, and the monkey motifs in this picture belong to a typical short tail form. The zoomorphs climbing up a 'slope' in the Pha Taem rock art considered to be dogs by Tan may be 'monkeys' (Tan 2018a: Fig. 6, No 4). There are also images of 'climbing dogs' in the Cangyuan rock art, but they are different from that in the Pha Taem rock art (Fig. 4, Nos 2–5).

'Boat' images. At present, only four purported boat images are known in the Pha Taem rock art. These are relatively vague and difficult to identify with the naked eye but can be seen through DStretch enhancement. According to their shapes, Tan divided the boats into three categories, namely 'canoe' (Tan 2018a: Fig. 7, No. 8), 'raft' (Fig. 7, Nos 32, 43) and 'double-hulled barge' (Fig. 7, No. 36) (Tan 2018a: 72). According to Tan, '[t]he "barge" appears to be made from two canoes lashed together, and is large enough to carry at least two "men", a "buffalo" and a "dog" (Tan 2018a: 72). Besides, T-shaped posts are depicted on either end of the 'boat' and Tan thought they 'were possibly used for mooring and also to hold the two hulls together' (Tan 2018a: 72). There is also one 'boat' image found in the Pak Ou Caves (Tan 2018b: Fig. 4).

So far, we have just found one boat image in the Cangyuan rock art (Fig. 7, Nos 1, 2). This image is from the Mankan II (also called Rangbai or Gun Buda) site. There is a 'human' I believe to be paddling a boat that looks like a canoe, which has a cattle-like animal on board. This kind of view is also supported by some scholars (Editorial Board of Complete Works of Chinese Art Classification 2007: 50). However, some others believe that it depicts a 'human' defending himself against a 'beast' (Deng 2004: 93).

Anthropomorphs. In the Pha Taem rock art, there are several anthropomorphs with bodies in the form of triangles (Fig. 8, Nos 20, 32, 33). This type of anthropomorphous motif is numerous in the Cangyuan rock art (Fig. 8, Nos 37–61). Besides the triangular body, the anthropomorphs have the legs separated, and some of them raise their hands. Besides, there is a squatting figure in the Pha Taem rock art (Tan 2018a, Fig. 11, No. 14) and similar figures are found in Cangyuan rock art (Fig. 2, No. 4). Moreover, its feather-like headwear is similar to that of the Pha Taem rock art (Fig. 8, Nos 20, 32, 33).

Through the comparative study above, we find that there are several similarities in Pha Taem rock art and



Figure 7. 'Boat' images in the Cangyuan rock art: (A) and (B) Mankan II site (after Editorial Board of Complete Works of Chinese Art Classification 2007: 48; Deng 2004: Fig. 77). (B) is an enlarged part of (A).

Cangyuan rock art. However, some of these provide only very weak links: red rock paintings are by far the most common in the world and cliff paintings occur in numerous traditions. Hand images are the most

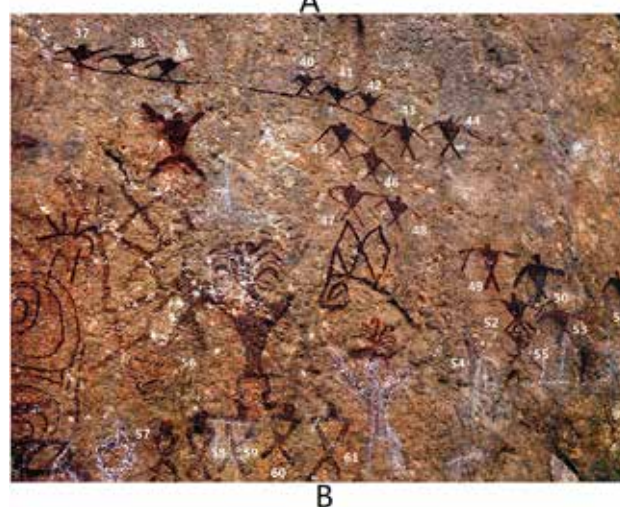
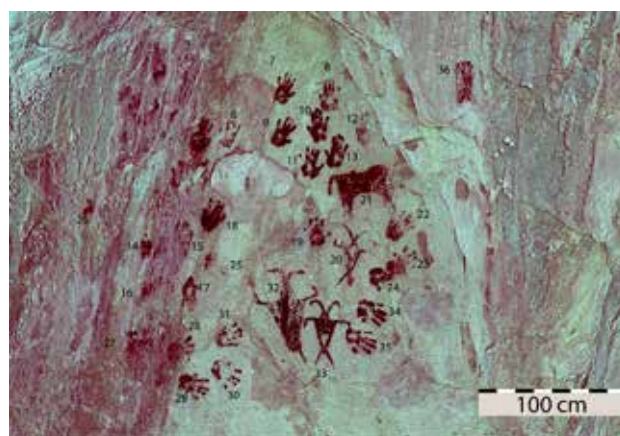


Figure 8. Anthropomorphs with triangular bodies: (A) Pha Taem rock art (after Tan 2018a: Fig. 8); (B) Manka Site of the Cangyuan rock art (after Editorial Board of Complete Works of Chinese Art Classification 2007: Fig. 8).

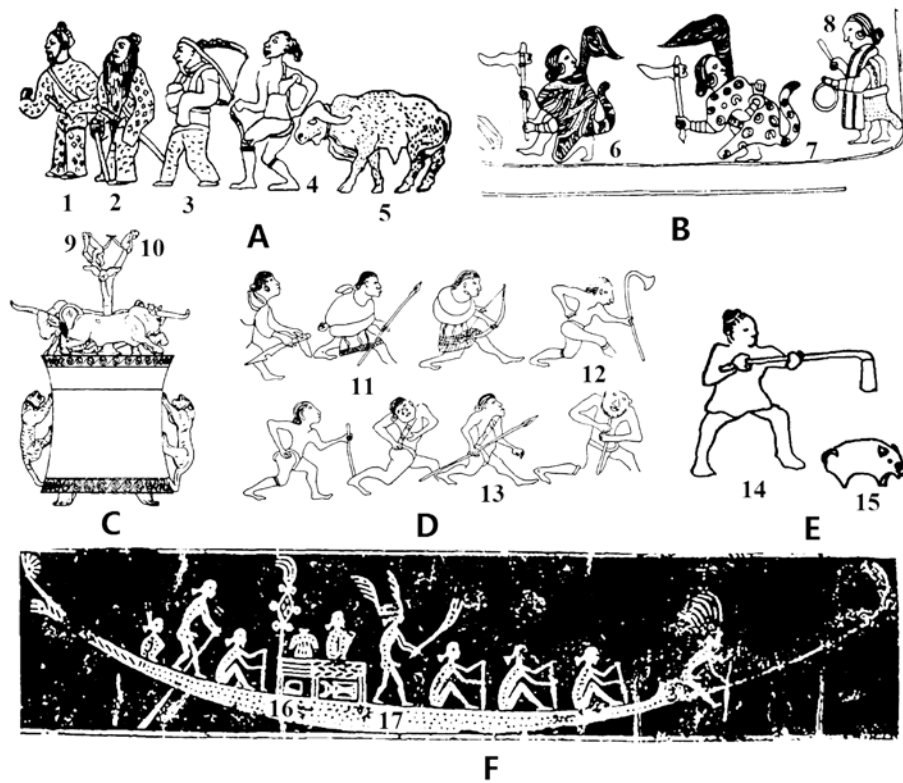


Figure 9. Bronze wares unearthed in Yunnan: (A) anthropomorphs and ox images on a bronze shell-storage container (after Feng 1961: Fig. 3, No. 1); (B) anthropomorphs with dagger-axe images on the bronze drum (after Yi 1993: Fig. 4); (C) monkey, zebu and tiger images on a bronze shell-storage container (after Yang 2011: Fig. 4-4, No. 2); (D) and (E) anthropomorphs with all kinds of weapons on a bronze shell-storage container (after Yi 1988: Fig. 9; Fig. 8, Nos 51, 52); (F) the boat images on a bronze drum (after Yi 1993: Fig. 8).

numerous painting motif known and are not adequate evidence to connect two traditions. Nevertheless, there are other common strands of evidence possibly linking the two traditions, and they might be considered to be of roughly the same period. Therefore, we can review the chronology of both of them and then explore the issues of the rock artists' ethnicities.

3. The chronology of the Cangyuan and the Pha Taem rock arts

N. H. Tan mainly judged the age of the Pha Taem rock art in two ways. He first assumed that the water level was much higher when the rock art was made, and then gradually decreased over a long period. Therefore, the date of the rock art followed the law that the higher the location, the earlier the date. Based on this, the relative chronology of different panels could be obtained. Later, he further narrowed the time frame through the 'diagnostic' images. The images he used were mainly 'water buffaloes' and 'dogs'. Water buffaloes have been exploited and domesticated in Southeast Asia from around 5000 years ago, while domesticated dogs do not appear until 2000 BCE in Neolithic contexts in northeast Thailand, but are more common in the Bronze Age. At the same time, considering the

level of organisation required to create the paintings vis-a-vis boat building and the depiction of domesticated 'water buffalo' and 'dogs', the Pha Taem rock art is younger than 4000 years (Tan 2018a: 74). This date is too early. Through a comparative analysis of images, we can quantify it more accurately. Since we have no direct dating, our judgment of the date can only be based on the cross-dating method according to unearthened and dated artefacts.

As for the date of the Cangyuan rock art, it has been introduced above, and the date widely accepted is between 3500 and 2500 years BP. There is room for further discussion about it. Now we consider the date of the rock art in the above two regions based on archaeologically unearthened artefacts.

First, the image of anthropomorphs leading a bovid has also been found in Yunnan bronze wares. In the tomb M13:2 of Shi Zhaishan in Jin Ning District, Kunming City, a bronze shell-storage container was unearthened bearing an image of four people and

a bovid. All images are walking in queue, the bovid is at the end of the queue and apparently led by the person in front of it. The four people in the picture are different, and the person leading the bovid is topless and seems to indicate a different identity (Fig. 9, Nos 1-5). The object's date is between 175 BCE and 178 BCE, in the middle and late Western Han Dynasty (Yunnan Provincial Museum 1959: 133-134). Also, one bronze pick (a particular weapon) with cattle pasture images was unearthened in Shi Zhaishan in 1956. Three human and one ox images were cast on the back of its handle. One of them was leading an ox in front, and the other two were driving the ox behind (Fig. 10, Nos 11-14). It was dated to the Western Han Dynasty and is now preserved in the Yunnan Provincial Museum.

Ox-chopping images were also found in the bronze wares of Yunnan. A bronze drum with boat images was unearthened in the tomb M13 of Shi Zhaishan. Two 'witches' dressed in tiger and leopard skins respectively are engraved in one of the boats, with their long tails high behind, and each of them is holding a dagger-axe (Fig. 9, Nos 6, 7). The shape of the dagger-axes is similar to the 'chopping tool' in the Pha Taem rock art (Tan 2018a: Fig. 6, No. 6). Moreover, a similar motif was also found in a bronze buckle ornament unearthened in Shi

Zhaishan in 1956. The buckle ornament is 9 cm high and 15 cm wide. A warrior wearing armour is standing in the forefront with a human head in his right hand, and a rope is held in his left hand, and the other end of the rope is tying a woman with a young child, a zebu and two sheep (Fig. 10, Nos 1–6). Another warrior wearing the same armour is standing behind the zebu, also holding a human head in his right hand, but unlike the former one, his left hand holds an axe, and there are a corpse and a snake at his feet (Fig. 10, Nos 7–9). The buckle was dated to the Western Han Dynasty and is now preserved in the Yunnan Provincial Museum. It should be noted that the axe is also similar to the ‘chopping tool’ in the Pha Taem rock art, and the bovids in both images are zebus. According to the book of *The history of Latter Han* (《后汉书》), zebus were common in Yunnan and were dedicated to the imperial court as a kind of tribute as early as the Eastern Han Dynasty (25–220 CE) (Fan 2007: 841). According to the archaeology, literature, genetic and mtDNA research, Chinese scholar Yu Fangjie believes that Yunnan was likely to be the earliest place where zebu cattle were introduced to China around the 4th century BCE (Yu 2016: 72).

A bronze drum unearthed in Azhang Village, Guangnan County, Yunnan, in 1900 features two symmetrically distributed ‘ox-chopping’ images on the waist of the drum. In the centre is a column with ‘flag’ which is decorated with ‘bird feathers’ at the top. One zebu is tied to the column. Besides, there is a pair of people with elaborate headwear in front of and behind the bovid

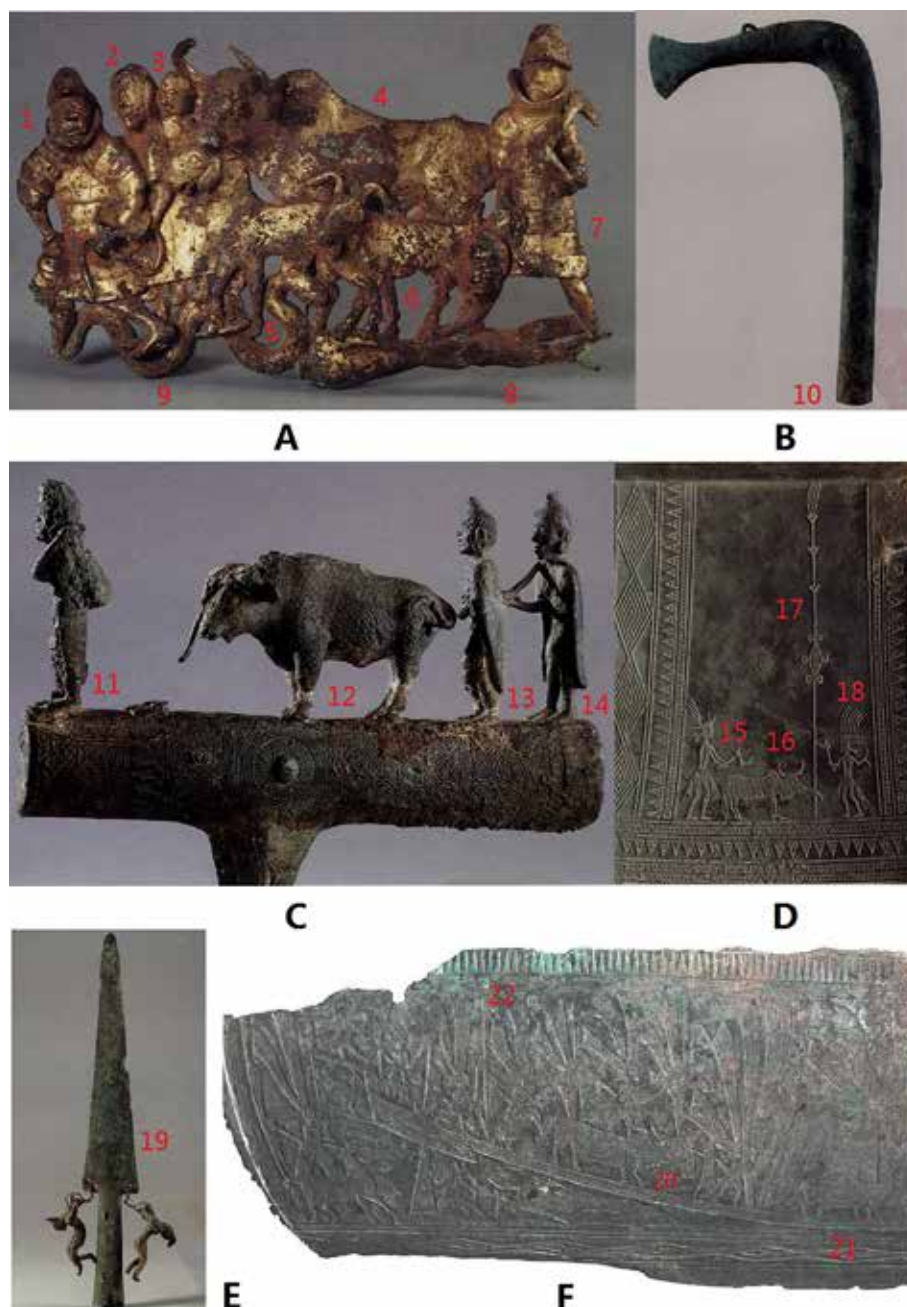


Figure 10. Bronze wares unearthed in Yunnan and Laos: (A) buckle ornament from Shi Zhaishan (after Editorial Board of Complete Works of Chinese Bronze Wares 1993: 116); (B) crank-axe from Li Jiashan (after Editorial Board of Complete Works of Chinese Bronze Wares. 1993: 91); (C) bronze pick from Shi Zhaishan (after Editorial Board of Complete Works of Chinese Bronze Wares. 1993: 103); (D) bronze drum from Azhang Village (after Editorial Board of Complete Works of Chinese Bronze Wares 1993: 171); (E) bronze spear from Shi Zhaishan (after Editorial Board of Complete Works of Chinese Bronze Wares 1993: 99); (F) bronze drum from Hok-Lao Village (after Li and Zhantapili 2016: 73).

holding axes and about to chop the animal (Fig. 10, Nos 15–18). It is similar to the ‘ox-chopping’ images in the rock art. As we have mentioned above, this tradition can still be seen in local Wa society. The bronze drum was dated to the Western Han Dynasty and is now preserved in the Yunnan Provincial Museum.

Also, there are many axes among Yunnan archaeological finds. One of them was a crank-axe unearthed in the Li Jiashan cemetery in Jiang Chuan District, Yu Xi City, Yunnan Province in 1972 (Fig. 10, No. 10). It was dated to the War-

ring States Period and is now preserved in the Yunnan Provincial Museum. As mentioned above, there is an 'ox-chopping' image at Meng Sheng site in the Cangyuan rock art, and the axe used for chopping has a long handle, the curved end of which is embedded in the axe (Fig. 4, No. 1). This type of axe was also found on a Shi Zhaishan bronze shell-storage container (Fig. 9, No. 12). It was unearthed in the tomb No. 1 at Shi Zhaishan in 1955 and is now preserved in the Yunnan Provincial Museum. It depicts eight anthropomorphs with weapons such as sticks, axes, bows and spears on the waist of the container. In addition, there are more than one hundred images cast on the lid of the container, two of which seem to be a 'humans' chopping 'pigs' with a 'long-shaft axe' (Fig. 9, Nos 14, 15). The 'long-shaft axe' here is also very similar to that of the Cangyuan rock art (Fig. 4, No. 1). Scholars generally believe that the images on the bronze shell-storage container reflect a sacrificial scene (Yi 1988: 47-49). It might indicate that the similar images in the rock art are also a reflections of sacrificial scenes.

An ox-slaughtering image has not yet been discovered in the archaeological finds, but many bronze spears have been unearthed in the Shi Zhaishan culture (Fig. 10, No. 19). They are similar to the spears (or javelins) used by the Wa people in the ox-slaughtering ceremonies (Fig. 5). Perhaps the 'weapons' in the rock art are these spears with handles. Similar human figures with spears were also found on a bronze shell-storage container unearthed in Tomb No. 1 at Shi Zhaishan (Fig. 9, Nos 11, 13).

Let us look at the monkey images. On the lid of a bronze shell-storage container unearthed in the tomb M71: 133 at Shi Zhaishan, a statue of three bovids is cast. In the middle of the oxen is a tree, and two monkeys are on the treetop (Fig. 9, Nos 9, 10). It was dated to the middle and late Western Han Dynasty (Yang 2011: 126). Similar images of oxen positioned under monkeys were also found in the Cangyuan rock art (Fig. 2, Nos 1-3) and the Pha Taem rock art (Tan 2018a: 69, Fig. 6, No. 4 and figure under it).

A 'boat' image with columns was found in the Pha Taem rock art, and similar motifs are also found on the bronze drums unearthed in Yunnan. One of them is from Guangnan County; it belongs to the Shi Zhaishan type. There are four boat images engraved on the drum, and each boat has seven or eight people on it. On one of the boats, there is a column with a 'flag' at the top that is possibly decorated with bird feathers (Fig. 9, No. 16). Besides, there is a person with feather-like headwear on the boat (Fig. 9, No. 17), reminiscent to Cangyuan rock art (Fig. 2, No. 4) and in the Pha Taem rock art (Fig. 8, Nos 20, 32, 33).

The bronze drums of Shi Zhaishan type were also found in Laos, but there they were classified as Heger type I. Chinese scholars Li Kunsheng and Li Anmin classified the Shi Zhaishan type as a sub-type of Heger type I (Li et al. 2010: 85). There is a detailed introduction to this type of bronze drums found in

Laos in the book *Bronze drums of China-Southeast Asia: Laos Volume* (Li et al. 2016). In the decoration of No. S1 bronze drum unearthed in Hok-Lao Village, Sepon District, Savannakhet Province, Laos, there are some motifs similar to those of the rock art. The bronze drum surface is missing, and there are several 'rowing men with feather headdress' design and two 'zebus' in one of the boats (Fig. 10, Nos 20, 21). As we mentioned above, there are anthropomorphs and zoomorphs on the 'boats' of both rock art concentrations. Besides, a column has also been portrayed on the boat (Fig. 10, No. 22). Therefore, the date of some of the images in the Pha Taem rock art may be comparable to that of the bronze drum.

The images of elephants were also popular in the Lao bronze drums, but they were much later, typically appearing in the Heger type III. The date of the Heger type III bronze drums is hotly debated, with many points of view ranging from the 5th century CE until modern time (Li et al. 2016: 43). However, it cannot be concluded that the date of the purported elephants in the Pha Taem rock art is different from that of other images, or that they are even later. Wang Ningsheng once pointed out that an essential feature of the Yue people is that they were good at domesticating elephants (Wang 1986: 68). The book *Huang Lan* (《皇览》) cited by collected annotations of *Biographic sketches of five emperors* (《五帝本纪》) in *Records of the grand historian* (《史记》) said: 'The emperor Shun (舜) was buried in Cangwu when he was dead, and the elephant cultivated land for him' (Sima 1999: 33). *The biographies of Dayuan* (《大宛列传》) in *Records of the grand historian* said: 'But I heard that there is a country called Dianyue (滇越) more than 1000 li west of Kunming, where people are riding elephants' (Sima 1999: 2402). According to the above records, Wang Ningsheng believed that the Yue people established the country of Dianyue, and their descendants always maintained the tradition of training elephants (Wang 1986: 68). Therefore, that tradition may be traced back at least to the Western Han Dynasty, and the entire scene in the Pha Taem rock art is related to sacrifice, so the zoomorphs including the 'elephants' in the rock art are all domesticated. Therefore, it is appropriate to set the date of the elephant images in the Western Han Dynasty, and it is equivalent to the date of the Shi Zhaishan bronze wares. As for the date of the bronze drums of Laos, Li Kunsheng and Huang Derong said: 'The Laos No. 1 drum is similar in shape and design to Xilin drum and Guangnan drum in China, it is in the middle and late Western Han Dynasty. The bronze drum on the Indo-China Peninsula can be divided into two periods, the early ones are the Shi Zhaishan type, and the late ones are the Leng Shuichong type, their date is from the middle and late Western Han Dynasty until the Tang and Song Dynasties' (Li et al. 2008).

Through the analysis of the diagnostic images, we find that the date of the Cangyuan rock art and the Pha Taem rock art is both comparable to those of the Shi

Zhaishan culture. However, that culture is not contemporaneous in Yunnan and Laos. Therefore, the dates of the two rock arts are not the same. The Shizhaishan culture flourished in Yunnan from the Warring States Period to the Eastern Han Dynasty (475 BCE–220 CE), while its prevalent date in Laos was equivalent to the middle and late Western Han Dynasty (about 140 BCE–8 CE). Therefore, we can argue that the date of the Cangyuan rock art is roughly 475 BCE–220 CE, and the date of the Pha Taem rock art is c. 140 BCE–8 CE.

4. Conclusion

Similarities between the Pha Taem and the Cangyuan rock art bodies indicate that the ethnic groups who made them may have had similar religious and ritual ideas, so they should be considered side by side for comprehensive research. As the direct dating approach has not been available so far, extensive use of ancient documents, archaeological finds, ethnic and folklore materials for indirect dating is also an effective approach to such problems. Due to the lack of archaeological materials and ancient documents in Laos, the research on the relationship between rock art and local culture is not enough. It is, therefore, necessary to make full use of evidence from neighbouring regions, especially a large number of relevant materials unearthed in Yunnan, China. The argument above indicates that there may be a relationship between the rock art corpora in the two regions. This painting tradition may have extended from Yunnan to northern Laos along the Mekong River, but the present research on the correlation between the two is still quite preliminary. It is hoped that the research in this paper can attract the attention of more scholars, and then establish cross-national and inter-regional cooperation. It is possible to use modern scientific and technological means to conduct as much research as possible on the dates of rock arts, and to find more direct evidence, in order to lay a good foundation for establishing the development sequence of rock art in southern China and Southeast Asia.

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REFERENCES

- DENG QIYAO 2004. 云南岩画艺术 *Yun Nan yan hua yi shu* (The rock art of Yunnan). Yunnan Fine Arts Publishing House, Kunming.
- DUAN SHILIN 1997. 再论云南沧源崖画的族属 — 兼与邱钟仑同志商榷 *Zai lun Yun Nan Cang Yuan ya hua de zu shu — Jian yu Qiu Zhong Lun tong zhi shang que* (On the ethnicity of the Cangyuan rock art and also discussing with Professor Qiu Zhonglun). 云南师范大学学报 (哲学社会科学版) *Yun Nan Shi Fan Da Xue Xue Bao (Zhe Xue She Hui Ke Xue Ban) Philosophy and Social Sciences Edition of Journal of Yunnan Normal University* 1: 27–34.
- Editorial Board of Complete Works of Chinese Art Classification 2007. 中国美术分类全集: 中国岩画全集5: 南部岩画 (二) *Zhong Guo mei shu fen lei quan ji: Zhong Guo yan hua quan ji 5: nan bu yan hua* (二) (Complete works of Chinese art classification: Volume 5 of complete works of Chinese rock arts: The second section of southern rock arts). Liaoning Fine Arts Publishing House, Shenyang.
- Editorial Board of Complete Works of Chinese Bronze Wares 1993. 中国美术分类全集: 中国青铜器全集14: 滇昆明 *Zhong Guo mei shu fen lei quan ji: Zhong Guo qing tong qi quan ji 14: Dian Kun Ming* (Complete works of Chinese bronze wares: The Dian and Kunming). Cultural Relics Publishing House, Beijing.
- FAN YE 2007. 后汉书 *Hou Han shu* (The history of the latter Han). Zhonghua Book Company, Beijing.
- FENG HANJI 1961. 云南晋宁石寨山出土文物的族属问题试探 *Yun Nan Jin Ning Shi Zhai Shan chu tu wen wu de zu shu wen ti shi tan* (Exploration of the ethnic problems of unearthed cultural relics in Shi Zhaishan, Jinning, Yunnan). 考古 *Kao Gu* (Archaeology) 9: 469–490.
- FENG QIANG 2012. 佧族剽牛仪式考源 *Wa zu piao niu yi shi kao yuan* (Origin of the Wa people's ox-slaughtering ceremony). 前沿 *Qian Yan* (Forward Position) 1: 177–178.
- FENG QIANG and WEI LIN 2012. 近代佧族剽牛仪式变迁的研究 *Jin dai Wa zu piao niu yi shi bian qian de yan jiu* (Change of Wa people's bull spearing ceremony in modern period). 曲靖师范学院学报 *Qu Jing Shi Fan Xue Yuan Xue Bao* (Journal of Qujing Normal University) 3: 59–62.
- HU YUFAN, WU XUEMING and SHI PUNAN 1984. 用孢粉化石考证古代崖画 *Yong bao fen hua shi kao zheng gu dai ya hua* (Using sporopollen fossils to study ancient cliff paintings). 化石 *Hua Shi* (Fossil) 2: 15.
- Investigation Team of Yunnan Provincial Institute of History 1966. 云南沧源崖画 *Yun Nan Cang Yuan ya hua* (The cliff painting of Cangyuan, Yunnan). 文物 *Wen Wu* (Cultural Relics) 2: 7–16, 38.
- LI FUQIANG and ZHANTAPILI JIANXISULA 2016. 中国—东南亚铜鼓: 老挝卷 *Zhong Guo — Dong Nan Ya Tong Gu: Lao Wo Juan* (The Bronze Drum of China and Southeast Asia: Laos Volume). Guangxi People's Publishing House, Nanning (in Chinese, Laos and English).
- LI KUNSHENG and HUANG DERONG 2008. 中国与东南亚的古代铜鼓 *Zhong Guo yu Dong Nan Ya de gu dai Tong Gu* (Ancient bronze drums of China and Southeast Asia). Yunnan Fine Arts Publishing House, Kunming.
- LI KUNSHENG and LI ANMIN 2010. 试论黑格尔I型铜鼓的三个亚型 — 以中国西南为中心 *Shi lun Hei Ge Er I xing Tong Gu de san ge ya xing — Yi Zhong Guo xi nan wei zhong xin* (On the three subtypes of Heiger type I bronze drums: centred on southwest China). 思想战线 *Si Xiang Zhan Xian* (Thinking) 3: 85–89.
- QIU ZHONGLUN 1995. 也谈沧源岩画的年代和族属 *Ye tan*

- Cang Yuan yan hua de nian dai he zu shu (Also on the date and ethnicity of the Cangyuan rock art). 云南民族学院学报 (哲学社会科学版) *Yun Nan Min Zu Xue Yuan Xue Bao (Zhe Xue She Hui Ke Xue Ban) Philosophy and Social Sciences Edition of Journal of Yunnan Nationalities University* 1: 26-33.
- SIMA QIAN 1999. 史记 *Shi Ji (Records of the grand historian)*. China Publishing House, Beijing.
- SHI ZHONGJIAN 1982. 试论越与骆越出自同源 *Shi lun Yue yu Luo Yue chu zi tong yuan (On Yue and Luoyue from the same origin)*. In Chen Guoqiang, Jiang Bingzhao and Wu Mianji (eds), 百越民族史论集 *Bai Yue min zu shi lun ji (The collection of Baiyue ethnic history)*, pp. 183-204. China Social Sciences Press, Beijing.
- The Geological Dictionary Office of Ministry of Geology 2005. 地质大辞典 (三) 古生物、地史分册 *Di Zhi da ci dian (III) Gu Sheng Wu, Di Shi fen ce (Volume III of geological dictionary: palaeontology and geohistory)*. Geological Publishing House, Beijing.
- TAN, N. H. 2018a. The cliff paintings of Pha Taem, Luang Prabang, Lao PDR. *Rock Art Research* 35(1): 62-78.
- TAN, N. H. 2018b. Rock art at the Cave of a Thousand Buddhas, Luang Prabang, Lao PDR. *Archaeological Research in Asia*, <https://doi.org/10.1016/j.ara.2018.01.001>, 9-1-2018.
- TAN, N. H. 2018c. Cluster identification in Southeast Asian rock art. *IPPA 2018: Southeast Asian Rock Art Beyond Images*, https://www.researchgate.net/publication/328027742_Cluster_Identification_in_Southeast_Asian_Rock_Art.
- TAN, N. H. 2019. Rock art in mainland Southeast Asia. In Jean Clottes and Benjamin Smith (eds), *Rock art in east Asia: a thematic study*, pp. 126-147. ICOMOS 4, Charenton-le-Pont.
- WANG NINGSHENG 1984. An introduction to rock paintings in Yunnan Province (People's Republic of China). *Rock Art Research* 1(2): 75-90.
- WANG NINGSHENG 1985. 云南沧源崖画的发现与研究 *Yun Nan Cang Yuan ya hua de fa xian yu yan jiu (The rock paintings of Cangyuan County, Yunnan: their discovery and research)*. Cultural Relics Publishing House, Beijing.
- WANG NINGSHENG 1986. 越濮不同源 *Yue Pu bu tong yuan (The different sources of the Yue and Pu people)*. 中南民族学院学报 *Zhong Nan Min Zu Xue Yuan Xue Bao (Journal of the South-Central University for Nationalities)*. Supplement: 65-71.
- WU DIANLEI 2016. 牛与灵魂一起回家 — 黔东南苗族砍牛送葬仪式调查与研究 *Niu yu ling hun yi qi hui jia — Qian dong nan Miao zu kan niu song zang yi shi diao cha yu yan jiu (The back home of cattle and the soul: an investigation of Miao's funeral ceremony by killing cattle in Qian dong nan)*. 原生态民族文化学刊 *Yuan Sheng Tai Min Zu Wen Hua Xue Kan (Journal of Original Ecological National Culture)* 4: 125-130.
- WU XUEMING 1989. 石佛洞新石器文化与沧源崖画关系探索 *Shi Fo Dong Xin Shi Qi wen hua yu Cang Yuan ya hua guan xi tan suo (Exploration of the relationship between Neolithic culture of Shifodong and the Cangyuan cliff painting)*. 云南文物 *Yun Nan Wen Wu (Yunnan Cultural Relics)* 25: 397-409.
- WU YONGCHANG 2003. 沧源崖画综说 *Cang Yuan ya hua zhong shuo (Overview of the Cangyuan cliff painting)*. 民族艺术研究 *Min Zu Yi Shu Yan Jiu (Ethnic Art Studies)* 51: 116-120.
- WU YUN, MOU XIAOMEI, XIAO BO and JI XUEPING 2019. Rock art in south-western China. In Jean Clottes and Benjamin Smith (eds), *Rock art in east Asia: a thematic study*, pp. 106-111. ICOMOS 4, Charenton-le-Pont.
- XU XIN 1989. 我国东部晚第四纪气候演变 *Wo Guo dong bu wan Di Si Ji qi hou yan bian (Late Quaternary climate changes in eastern China)*. 冰川冻土 *Bing Chuan Dong Tu (Journal of Glaciology and Geocryology)* 1: 10-19.
- XU HAIPENG 1988. 广西左江流域非临江崖壁画点的地理环境研究 *Guang Xi Zuo Jiang liu yu fei lin jiang ya bi hua dian de di li huan jing yan jiu (On the geographical environment of the non-riverside rock art of the Zuojiang River)*. 广西民族研究 *Guang Xi Min Zu Yan Jiu (Guangxi Ethnic Studies)* 1: 91.
- YANG BOKANG 2002. 论云南沧源崖画的年代 *Lun Yun Nan Cang Yuan ya hua de nian dai (On the date of the rock paintings in Cangyuan, Yunnan)*. 楚雄师范学院学报 *Chu Xiong Shi Fan Xue Yuan Xue Bao (Journal of Chuxiong Normal University)* 5: 70-72.
- YANG TIANYOU 1986. 云南的原始岩画 *Yun Nan de yuan shi yan hua (The primitive rock art of Yunnan)*. In Yunnan Provincial Museum (ed.), 云南省博物馆建馆三十五周年论文集 (1951-1986) *Yun Nan Sheng Bo Wu Guan jian guan 35 zhou nian lun wen ji (The paper collection of the 35th Anniversary of the Foundation of Yunnan Provincial Museum (1951-1986))*. Internal Publications Issued.
- YANG YONG 2011. 战国秦汉时期云贵高原考古学文化研究 *Zhan Guo Qin Han shi qi Yun Gui gao yuan kao gu xue wen hua yan jiu (Study on archaeological culture of Yunnan-Guizhou Plateau in the Warring States period and Qin and Han Dynasties)*. Science Press, Beijing.
- YI XUEZHONG 1988. 晋宁石寨山1号墓贮贝器上人物雕像考释 *Jin Ning Shi Zhai Shan 1 hao zhu bei qi shang ren wu diao xiang kao shi (A study of the statues of people on the shell of the No. 1 tomb in Shizhaishan, Jinning)*. 考古学报 *Kao Gu Xue Bao (Acta Archaeologica Sinica)* 1: 37-49.
- YI XUEZHONG 1993. 试论古代铜鼓的社鼓职能 (之二) — 铜鼓主体纹饰新探 *Shi lun gu dai Tong Gu de she gu zhi neng (二) — Tong Gu zhu ti wen shi xin tan (An approach to the function of ancient bronze drums as tribal drums (II) — Abstract of a new thematic study of figures on bronze drums)*. In Chen Yuanzhang, Qiu Zhonglun and Jiang Tingyu (eds), 铜鼓和青铜文化的新探索 — 中国南方及东南亚地区古代铜鼓和青铜文化第二次国际学术讨论会论文集 *Tong Gu he qing tong wen hua de xin tan suo — Zhong Guo nan fang ji Dong Nan Ya di qu gu dai Tong Gu he qing tong wen hua di er ci guo ji xue shu tao lun hui lun wen ji (The new exploration of bronze drums and bronze cultures — the Second International Conference on Ancient Bronze Drums and Bronze Cultures in Southern China and Southeast Asia)*, pp. 99-107. Guangxi Nationalities Publishing House, Nanning.
- YU FANGJIE 2016. 滇文化瘤牛形象研究 *Dian wen hua liu niu xing xiang yan jiu (A study on the zebu images in Dian culture)*, 民族艺术 *Min Zu Yi Shu (National Arts)* 3: 72-81.
- Yunnan Institute of Cultural Relics and Archaeology, Kunming Museum, Guandu District Museum 2001. 云南昆明羊甫头墓地发掘简报 *Yun Nan Kun Ming Yang Fu Tou mu di fa jue jian bao (Excavation of a graveyard at Yangfutou, Kunming, Yunnan)*. 文物 *Wen Wu (Cultural Relics)* 4: 4-53.
- Yunnan Provincial Museum 1959. 云南晋宁石寨山古墓群发掘报告 *Yun Nan Jin Ning Shi Zhai Shan gu mu qun fa jue bao gao (Excavation report of the ancient tombs of Shi Zhaishan in Jinning, Yunnan)*. Cultural Relics Publishing House, Beijing.
- ZENG YALAN 1997. 云南沧源崖画与石器遗址 *Yun Nan Cang Yuan ya hua yu shi qi yi zhi (The cliff paintings and stoneware sites in Yunnan)*, 四川文物 *Si Chuan Wen Wu (Sichuan Cultural Relics)* 5: 21-26.