Recent Rock Art Finds from North of Kavar in Fars, Iran

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Abstract: An archaeological survey of Tasouj district, Kavar County in eastern Fars province was conducted by Parsa Ghasemi in March 2012. The survey resulted in the identification of 34 archaeological sites. Two sites – a cave and a rock shelter named Pir-Barreh – contained rock paintings. The two sites are located 10km north of Kavar, about 1km northeast of the village of Anjireh on the eastern flank of the Pir-Barreh gorge. The rock art is predominantly composed of paintings in ochre red, depicting designs that may be dendromorphs (tree forms), geometric/abstract patterns (square, fingertip decorations, cross-like motifs, a possible image of the sun, filled circular images and other unidentified forms), and positive hand prints. These works were probably created by dabbing fingers in a moistened red pigment which is likely to have been hematite. The style used in these paintings is similar to those discovered in eastern Fars. The existence of paintings of a similar style in eastern Fars province may indicate that a specific style of rock art culture was prevalent across a wide area of the southern Zagros Mountains region. This painting style bears a strong resemblance to the style of motifs on potsherds dated to the Chalcolithic era found in the region, including some from Tall-e Gap (5000-4200 BC), from Bakun A (4200-3800 BC) and potsherds of the Late Susiana 1 phase (4800-4300 B.C). This style and motif repertoire appears to have had remarkable continuity into the recent past in the tattoo art of some nomadic groups in the region.

Keywords: Rock Art, Painting, Cave, Rock Shelter, Pir-Barreh, Kavar, Iran

1. Introduction

The paintings at the cave and rock shelter of Pir-Barreh are remarkable for several reasons which will be explored in the current paper. Their discovery adds a new element to the corpus of documented (possibly) pre-historic rock art in southern Fars Province. Earlier studies conducted on rock art in Fars Province include an important one on the rock shelters of Abdozou in Firouzabad. Norouzi (Norouzi 2005)., which were more thoroughly examined in 2006 (Ghasimi et. al 2014). Other studies conducted in this area include those on the rock art at Naghsh-e Rostam and Naghsh-e Rajab carried out by Cyrus Barfi and Taher Ghasimi (Ghasimi and Mohammadi 2011). A study on rock art clusters at the Tang-e Tadovan rock shelter and cave of Tang-e Teihouei in Jahrom has also been undertaken by Fazel, Fazel & Alibaigi (Fazel 2011: 69-78; Fazel and Alibaigi 2012: 187-190).

1.1. Overview of Geography, Environment and Geology of the Region

Pir-Barreh is located in the village of Tasouj in Kavar County about 40km east of Shiraz (Fig. 1).

Geologically, the region marks the boundary between two sedimentary-structural zones that are part of the Zagros Mountain range. The age of the deposits spans from the Cretaceous (Starvak Formation) to the Pleistocene (Bakhtiari Fm.). The latter is covered with shallow deposits dating to the upper Pleistocene and Holocene, (Andalibi and Yousefi 2000).

Major peaks in the region include Mount Ghale’h Ghalat (2237m), Mount Fath Abad (2095m), Mount Kaam (1980m), Mount Kam (2404m), Mount Gar (2651m) and Mount
Bahman (2375m) (The gazetteer of mountains in the I. R of Iran, 2005, pp. 255, 259, 262, 271, 271)

Fig. 1. Distribution map of documented rock art sites in Iran and location map of Pir-Barreh cave and rock shelter sites in the study area.

Fig. 2. General views from the north and west of Pir-Barreh rock shelter and the location of its paintings.
The cave and rock shelter of Pir-Barreh developed in thick-bedded green, brown and gray limestone. The limestone deposits in the area are part of the Asmari formation, which includes marly interlayers. The cave and rock shelter are contained within alluvial rock deposits in a gorge. The Ghareh Bagh overthrust fault is oriented along a northeast-southwest direction and passes west of the Pir-Barreh cave and rock shelter. (Andalibi and Yousefi 2000).

Mines in the region produce sand, aggregate, marl, limestone and red ochre soil. (Sedaghat Kish 2012: 47). The occurrence of abundant suitable ochre deposits has allowed for the development of over 80 brick-making factories in the region.

The soil of the region has various components including clay, sand, and gravel. Generally the plain of Kavar has fertile soils and conditions conducive to agriculture.

Crops of the region include predominantly wheat, barley, corn, rice, beetroot, cotton, vegetables, fodder, almond, citrus fruits, grapes and pistachio nuts.

The main water source of the region is the Gharah Ajagh River which flows 11km south and west of the Pir-Barreh cave and rock shelter sites. The river extends for 508 km from its source in the village of Zangeneh (about 30km northeast of Kazeroon), emptying into the Persian Gulf via Kavar, Firouzabad. (The gazetteer of rivers in the I. R. of Iran: 2005: 193).

1.2. The Rock Shelter of Pir-Barreh

The rock shelter of Pir-Barreh is located about 1km east of the village of Anjireh, north of Kavar at a height of 1888m above sea level, at the eastern end of the Pir-Barreh gorge (291939.1 N, 524222.6 E). The shelter is about 18m above the valley floor on the south side.

The shelter is a rather large one with an area of about 46m². The dimensions include a maximum depth of 3.90m, a maximum width of 19m (the entrance), and an approximate highest point of 10m. The shelter faces northwest. The wide entrance provides the shelter with good lighting during the day. It has a flat floor composed of sedimentary materials. In front of the shelter, there is a natural terrace which is covered with grass and sediments. The terrace reaches the valley floor with a gentle slope. In front of the shelter are large blocks of limestone which were probably separated from the mountain by natural causes such as earthquakes and landslides and natural weathering (Fig. 2).

1.3. Characteristics of the Paintings at the Pir-Barreh Rock Shelter

The paintings at the Pir-Barreh rock shelter are pictographs created by dabbing red paint on the vertical wall of the shelter. Typologically, motifs include handprints, dendromorphs, geometric patterns, fingerprint decorations, Fylfot (swastika), and images of the sun. In other words, the paintings resemble vegetal, geometric and abstract images in addition to positive prints of a right hand, created using fingers and a red pigment such as ochre. This pigment is probably a mixture of hematite, water, animal fat and plant saps. One interesting feature of this rock art is the prolific fingertip dabs made around the edge of some of the other designs.

The designs are now described counterclockwise from the western wall to the eastern one.
The first clusters of paintings was created on the margins of the western wall and includes fingertip decorations. Unfortunately most of the cluster has been destroyed by erosion and abrasion (Fig. 3). Motifs in this cluster are comparable with the motifs on ceramics discovered at Tall-e Bakun A (Fig. 4A1). The second cluster, which has the most interesting elements in the study, includes plant motifs (trees), the sun, squares, and marks created by the fingertip dabbing technique which are painted close to each other. The scene includes a tree with three main branches and more sub-branches. Beside the tree, a sun-like motif is visible with rays radiating outwards. The scene is completed with a cruciform motif in the middle. The cluster also includes a rectangular figure divided into four almost equal parts by two lines. The cluster is surrounded by fingertip dabs (Fig. 5). This decoration may be compared with designs on potsherds of the Chalcolithic era. The tree-like motif may also be compared with the plant motifs on a potsherd discovered at Tall-e Bakun A (Chalcolithic era 4500-4100 B.C.; Fig. 4A4), the plant rock carving from Deh Tal Hormozgan (Fig. 6C), the plant motifs from the Shah Firouz mound in Sirjan, (Farhadi, 1377; Fig. 6D), and rock paintings in Meymand, Kerman (Fig. 6A and B).

Fig. 4. A: sample of potsherds from Tall-e Bakoun A. Fig. A4 Langsdorff and McCown [48]. Plate 36 [10], B: sample of potsherds from Tall-e Gap along with dotted images C: sample of potsherd from Late Susiana 1 along with dotted images Fukai [53]. Pls. XXI, XXII, XXX).
Fig. 5. Drawing and photo of plant motifs (trees), motifs of the sun, squares and motifs made with fingertip dabs.

Fig. 6. A and B: Images of paintings discovered from Eshkaft (Rock Shelter) in Meymand, Kerman province; C: Plant-like carving discovered in Deh Tal Bastak in Hormuzgan, by Taher Ghasimi 1389; D: Carving of a plant from Shah Firouz mound in Sirjan Farhadi [11]. Fig. 144.

On the eastern part of the cluster there are plant and abstract motifs, and on the edge of the eastern wall there is also a positive print of a right hand, most of which has been eroded away by natural processes (Fig. 7).
Fig. 7. Drawings and photos of a plant motif, an abstract motif and Positive print of a right hand.
Fig. 8. Photos of the Pir-Barreh cave: a general view of the cave and the internal chamber.
Eleven lithic tools were found around the rock shelter. The artifacts are made of flint and are either dark or light brown or dark red. The most significant tools among the finds include one retouched blade and three simple chips, one of which is a stone core. Collected stone artifacts are similar to tools documented as dating to the middle Paleolithic.

Seven potsherds were collected from the site, made of gray, buff, red and brown clay. Two pieces of pot are covered by some sort of gray clay slip; one piece is glazed on both sides in blue; and one other is decorated with parallel horizontal lines on the outer surface. The potsherds were fired at a sufficient temperature and belong to the early and middle Islamic periods (8th - 13th century A. D) (Ghasemi 2012).

### 1.4. Pir-Barreh Cave

Pir-Barreh cave is situated southeast of Pir-Barreh valley, about 100 meters away from the Pir-Barreh rock shelter. It is 1906m above sea level at map coordinates 291933.8 N and 524226.1 E.

The entrance of the cave is about 20m above the valley and has an almost vertical oval shape. It is 32.7m long and about 12m high at its entrance. The deepest place of the cave is about 28.8m away from its entrance.

A truncated stone wall now standing to a height of about 50 cm is visible at the entrance of the cave (on the northeastern side). The wall is probably the remains of a sheepcote made by nomads. There is also a remnant limestone barrier which separates the inner part of the cave from the outer part. The wall may have been created by the deposition of carbonate-laden waters inside the cave, or through erosion of the cave’s chamber walls. Some parts of the areas surrounding the cave and also some parts of the cave floor are covered with more recent deposits. Located in the upper part of a carbonate wall, is a spring which runs down the face of a carbonate wall, flowing into a concrete pool built in recent years to supply drinking water to the village of Anjireh. The outer surface of the stone wall, over which the spring waters runs, is covered with vegetation and lichen (Fig. 8).

### 1.5. Paintings at Pir Barreh Cave

The paintings of the Pir Barreh cave were created on its walls and at heights between 50cm to 250cm above the cave floor. They were made with a brownish-red pigment, probably hematite (ochre). Motifs in the cave include positive imprints of a human hand, fingertip decorations, and circular and geometric motifs (Figs. 9-10).

The positive hand imprints are often only representations of long fingers, probably created by painters putting their hands in the paint and drawing their hands over the wall. Similarly the circular figures were probably created by the painters’ palms. These motifs, applied with a human hand, are also similar to those found on ceramics from Tall-e Bakun (Chalcolithic era 4100-4500 B. C.; Fig. 4A3). An interesting aspect of the rock art in the Pir-Barreh cave is that some of the features such as the circular motifs are depicted on Travertine rock faces ‘Personal communication’ with Sarem Amini Fig. 9B). Dating the substrate rocks could be helpful in refining the dating of the features on them. For precise dating of the travertine deposits, radioisotope dating by techniques such as U-series should be employed. Most of the motifs on the cave walls have been damaged by natural erosion or human-induced abrasion.

Fig. 9. A: Positive print of incomplete hand and fingertip decorations B: Circular, filled motifs.
2. Discussion

Iran has a significant place in Asia regarding amount and distribution of rock art across country, however, compared to other Asian countries, it is poor as it comes to studies conducted on Iranian rock art and methodological research has not been carried out in this case so far. Meanwhile comprehensive studies have been carried out on rock art in other parts of Asia namely Middle Asia, (Rozwadowski 2004; Rozwadowski and Kośko 2002; Frankfort 1998). India (Bednaric et al 1991; Bednaric 1993; Chakravarty & Bednaric 1997; Chakraverty 2004). China, Bednarik & Fushun 1991; Fushun 1992), and Arabia, (Bednarik & Khan 2005).

One main obstacle for studying rock art in Iran could be lack of laboratory facilities for absolute dating which has rendered it very difficult to present a precise and thorough timetable for archeological studies in this field. Lacking a credible chronological framework, we have poor knowledge on changes in and sequences of styles in Iranian rock art. Hence, what we know about rock art in Iran is mainly based on descriptions and the dating is based on vague evidence and comparison of style and technique or cultural materials found in the sites.

In other words, the chronology and starting point of rock art in Iran is not known clearly. There is no compelling evidence according to which we may consider Paleolithic era as the starting point of rock art in Iran. This is in spite of the fact that rock art dates back to Upper Paleolithic era in some countries, (Durrand 1995; Clottes 2008; Steif & Gray 2010&2010).

Are the motifs created in the Pir-Barreh by early settlers of the site in middle Paleolithic era?

As several stone tools have been discovered by Parsa Ghasemi’s from Pir-Barreh rock shelter, it is probable that the motifs were created in Paleolithic era. Fars province is generally rich in Paleolithic sites with oldest remains discovered in the province belonging to middle Paleolithic era. One discovered site of the mentioned period is the rock shelter near Maharlu Lake which is located about 4km from Pir-Barreh site (Field 1939). Furthermore, Sumner discovered several middle and upper Paleolithic site in the area in 1960s (Sumner 1994); in 1978 several similar sites were found by Rosenberg (Rosenberg 1998); also in past decade young Iranian archeologists have discovered sites dating back to upper Paleolithic era. (Shidrang 2004; Zarei & Karami 2005, Dashtizadeh 2006a &2006b).

One of most important sites in Fars province belonging to Paleolithic era and beyond it was discovered by Ikeda in Arsanjan which has recently been excavated (Ikeda 1979).

According to archeological founds, Fars province has been settled by humans in middle Paleolithic, Epi Paleolithic, and Neolithic eras. Proofs of this fact mainly include stone tools discovered in caves and rock shelters (Atai 2006; Biglari 2007&2012; Field 1939; Piperno 1974; Pullar 2007; Shidrang 2004; Barfi & Tsuneki 2007; Tsuneki and Zeidi 2008). These artifacts could be evidence that settlers of these shelters have created the motifs throughout middle Paleolithic era. However this won’t be a credible hypothesis without methodological and scientific studies in the future.

Is it probable that Pir-Barreh rock paintings were created in Epipalaeolithic and Pre-Pottery Neolithic eras?

There is no evidence to let us attribute the art discovered in these two sites to Epipalaeolithic and Pre-Pottery Neolithic
eras. Though, field studies conducted in Fars prove that caves and rock shelters have been actively settled through Epipalaeolithic and Pre-Pottery Neolithic eras in Fars province (Rosenberg 1998; Atai 2006; Pullar 1975; Tsuneki & Zeidi 2007; Brenbeck et al 2008).

Considering similarities of motifs on potsherds found in Tall-e-Gap and Tall-e-Bakun A, is it probable that rock paintings of Pir-Barreh were created in Chalcolithic and ceramic Neolithic eras?

Among main archeological findings that could be used in relative dating of rock paintings after Paleolithic era are motifs on potsherds. Imagery on pottery using natural colors had been common in areas of the Zagros and Central Iranian plateau and this has been skillfully practiced during Chalcolithic and Bronze eras. Many of the images on potsherds of these eras could be compared with rock art in the Zagros and central Iranian Plateau. Therefore considering style of images on potsherds of different eras is essential for studying rock art.

There are many similarities in style between rock paintings in cave and rock shelter of Pir-Barreh and works of Gap and Bakun A. These similarities are main basis for relative dating or evidence to continuous use of these types of images in Chalcolithic era.

In the chronology presented by Abbas Alizadeh the Gap period (5000-4200 BC) and Bakun A (4200-3800 BC) are described as middle and new Fars periods. During this period a type of buff painted pottery became common which had been unprecedented in Fars and is attributed to the new culture (Alizadeh 2006). Alizadeh believes potsherds of Bakun enjoy a denser geographical distribution (500 in 100km) than other cultures of late prehistoric stages of in south and southwest of Iran which proves a nomadic society centered in Marv Dasht (Alizadeh 2003).

Images commonly depicted on these potsherds are of closest similarity to rock art studied in current paper. Images on potsherds of this period include geometric and vegetal motifs and... (Langsdroff and McCown 1942). Material culture discovered from this era somewhat show transition towards more complex society. Alizadeh believes the societies creating these complexities are nomadic tribes with a social structure that allows them to have features of complex societies despite being nomads (Alizadeh 2003). Therefore it is possible that the creators of these art works which are of the same style are nomadic societies of Bakun.

![Fig. 11. Photos and sketches of rock shelter of Abdozou in Firouzabad, Fars province [2]. Ghasimi et al. figs. 6 & 9.](image-url)
Alizadeh argued that a major stylistic difference between pottery of the late Middle Susiana (5200-4800 B.C.) and Late Susiana 1 periods (4800-4300 B.C.) is the presence of decorative dots around animal and geometric motifs, (Alizadeh, 2006: Fig. 4C). This feature is also found on some of the potsherds from Tall-e Gap (5000-4200 B.C) (Alizadeh 2006: Fig. 4B), Tall-e Bakun A (4200-3800 B.C. (Alizadeh 2006: Fig. 4A), the rock paintings in Pir-Barreh, motifs in the rock shelter of Abdozou in Firouzabad (Ghasimi et al 2014) (Fig. 11), the rock shelter of Tang-e Tadovan and in the cave of Tang-e Tihouei in Jahrom (Fazel 2011: 69-78; Fazel and Alibaigi 2012).

Continuity in the use of these types of decoration is evident in motifs observed in the tents of nomadic tribes (Fig. 12) and also their tattoos (Mokhtarian & Shokri 2010; Sajirati Poor 2009; unnamed 2008; Farzin 2005). In fact, we may venture that the style and application method of some of the motifs from the Chalcolithic era and culture has continued down to our own times. The utility of careful anthropological studies stands out here.

Why should the paintings of Pir-Barreh and other sites in Fars area be attributed to the same local style originated by native people?

The paintings of Pir-Barreh cave and rock shelter and other sites in Fars are similar in technique, color, style and themes which indicates the existence of a special style in rock art throughout this area of the southern Zagros which is unique in these parts of Iran.

In Pir-Barreh rock shelter a circular image (sun-like) is visible which is divided to four parts by crossing lines and decorated by rays radiating outwards. The same image occurs in Tang-e Tihouei in Jahrom, the image is also found in Firouzabad where the inner part of the image is decorated with dots. The paintings in Pir-Barreh are surrounded by fingertip dabs, a style which is repeated in paintings of Tang-e Tadovan rock shelter and Abdozou rock shelter in Firouzabad. Vegetal motifs (tree) in Pir-Barreh also occur in Deh-Tal in Hormozgan, Shah FirouzTepe in Sirjan, Meymand in Kerman, and in paintings of Tang-e Tadovan rock shelter in Jahrom. All these similarities indicate the existence of a local style which had been originated by native cultures in Fars province using fingertip dabs and red clay.

![Fig. 12. A: Motifs painted on black tents by nomadic women Farhadi [11]. Figs. 162-165; B: Motif of circle on black tents and image of branding rams in Khorramabad in 2009 Mokhtarian and Shokri [48]. Figs. 16, 18 & 21.](image-url)
Anthropological studies of the motifs used by the nomadic tribes of southern Iran in their tents and as tattoo motifs may help establish what they meant to the peoples of Fars in much earlier times. It may be that the use of ancient abstract and geometric motifs in the tents of nomadic tribes down to the present day may indicate that they continue to convey certain special significances for the local people. The results of one such study demonstrated that Lori nomadic tribes used wheat paste to draw images of the sun, eyes, circles, interrelated squares, dots and Fylfot (swastikas) on their tents, and believed that these motifs protected humans against sore eyes and similar diseases. These motifs, in the belief system of people in Lorestan, are symbols of the earth, sun, stars and paste to draw images of the sun, eyes, circles, interrelated squares, dots and Fylfot (swastikas) on their tents, and believed that these motifs protected humans against sore eyes and similar diseases. These motifs, in the belief system of people in Lorestan, are symbols of the earth, sun, stars and rain (Mokhtarian and Shokry 2010) (Fig. 12B). The results of a similar study have shown that tattooing was common among the Arab tribes in Khuzestan province and was used for medical or decorative purposes, or as charms, often by elderly or middle-aged people (Sajirati Poor 2009). The results of another study of the Afshar tribe and Gharaee tribe in areas between Sirjan and Haji Abad, near Bandar Abbas, indicated that motifs of sheepcotes, sheep dogs, shepherds’ bags, dancing shepherds and Fylfot (swastikas) are drawn on tents to increase cattle, milk and dairy production during the first quarter of the year (Fahadi 1996) (Fig. 12A).

Late Magdalini paintings in caves of southwestern France (Marsoulas), Bedeilhac and Niaux also employ similar motifs. Clottes 1995; Fritz & Gilles 2004). In Marsoulas the decorations were also applied using only the fingers (Jaubert, n. d.). Paintings discovered in Pir-Barreh are not much similar to other paintings found in Iran or other parts of Asia. Hence they must have been created by artists of local cultures in Fars and southern Iran from Paleolithic era to later times.

3. Conclusion

Studies on Iranian rock art are still at preliminary stage, therefore the data and available documents related to dating the discoveries are rather based on guess and probabilities. In relative dating of these paintings one must resort to the analysis of the background in which they have been discovered. The same approach has been applied for dating the finds at Pir-Barreh through which and based on archeological evidence the rock paintings have been determined to belong to various eras from middle Paleolithic to present times. Data and documents available in Pir-Barreh cannot prove at what period. Discovery of this local style in Fars is a beginning to studying and identification of rock art in this region of Iran and southwest of Asia.

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