BRIEF REPORTS

Newly discovered petroglyphs in Kyzyl Dara gorge, western Tian Shan, Uzbekistan

By M. LELOCH, M. KOT, K. SZYMCZAK, M. M. KHUJANAZAROV and A. N. KHOLMATOV

Introduction

Studies of rock art in central Asia have been conducted for decades by numerous groups of researchers (Khujanazarov 2004). Still, despite the overwhelmingly large number of known archaeological sites (Tashbaeva et al. 2001; Rozwadowski and Lymer 2011), specific natural conditions effectively delay or prevent further discoveries, especially in the high mountain regions. However, new sites are still being found (Augustinová and Stančo 2016).

In 2018, the Polish-Uzbek archaeological expedition operating in eastern Uzbekistan in the Chatkal Range (Fig. 1A), which is a part of the western Tian Shan piedmonts, was informed about petroglyphs found high in the mountains nearby the Kyzyl Dara gorge. The gorge stretches for 9 km from the Katta Sai valley (altitude 1600 m a.s.l.) up to the mountain pass to the Ertash Sai valley situated at an altitude of 3100 m (Fig. 1B).

During a few days crossing from the Katta Sai valley to the Ertash Sai valley along Kyzyl Dara gorge in July 2019, a group of archaeologists supported by alpinists came across rocks covered with thousands of petroglyphs. Many rocks featuring single or multiple motifs found so far are located on the southern slope of the gorge as well as behind the mountain pass, on the northern slope converging towards Ertash Sai valley. However, the most impressive concentration of petroglyphs containing several thousand motifs (called Kyzyl Dara 1) was found in the middle part of the gorge, about halfway from one valley to another (Fig. 1C).

Recently discovered sites are located in high mountain areas, where the abundance of places convenient for producing petroglyphs often prevents comprehensive examination of all potential points. The accidental nature of the presented find is a reason why its present assessment is only preliminary. Despite this, the information collected allows us to estimate the number of petroglyphs concentrated in this archaeological site to be at least several thousand.

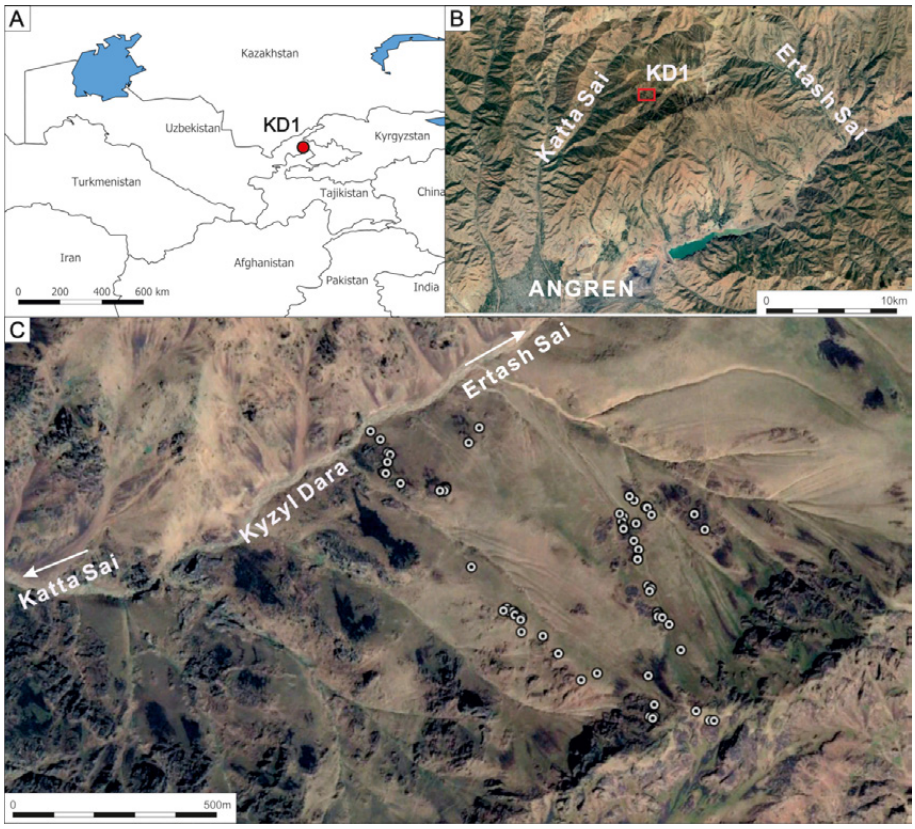

Figure 1. *A and B: location of the Kyzyl Dara 1 site; C: concentration of petroglyphs located so far.*

Kyzyl Dara 1

The concentration of depictions is located in a specific, at first glance prominent place. Walking from the side of Katta Sai valley along the deep, narrow rock gorge, the site is located at a clear widening of the gorge and visibly opened space (Fig. 2). Due to the specific con-

ditions, this place is still intensively used by sheepherders.

On the southern slope covered with grass, there are numerous boulders with surfaces of several to several dozen square metres. On these surfaces, covered with dark manganese patina, the distinctive light petroglyphs were engraved (Fig. 3).

During the initial documentation, dozens of panels were documented and inventoried using photographs, drawings and handheld GPS receiver. The scale of the site, however, allowed only an estimate of its area as being at least 50 ha, of which panels with the highest density of rock art occupy about 7 ha. The entire site extends from the bottom of the ravine to the top of the hill towering above it, ranging in altitude from 2600 m to 3100 m a.s.l.

Temperature, heavy snowfall and thaw lasting until the end of July intensify erosion. The petroglyphs located near the ridge are in few cases so heavily eroded that they are barely visible. Boulders covered with rock art are surrounded by other rocks that have fallen from the higher parts of the slope. Among them, one can see also the fragments of shattered rocks covered with petroglyphs.

The fact that Uzbekistan is now opening up to tourism can potentially have a significant effect on such archaeological sites. The growing interest in the area, when used appropriately, can help protect an important archaeological site. In turn, leaving the situation as it is can have the opposite, harmful effect.

Figure 2. *View of the Kyzyl Dara 1 site from the bottom of the gorge.*

Figure 3. *Patinated rocks covered with petroglyphs, Kyzyl Dara 1.*

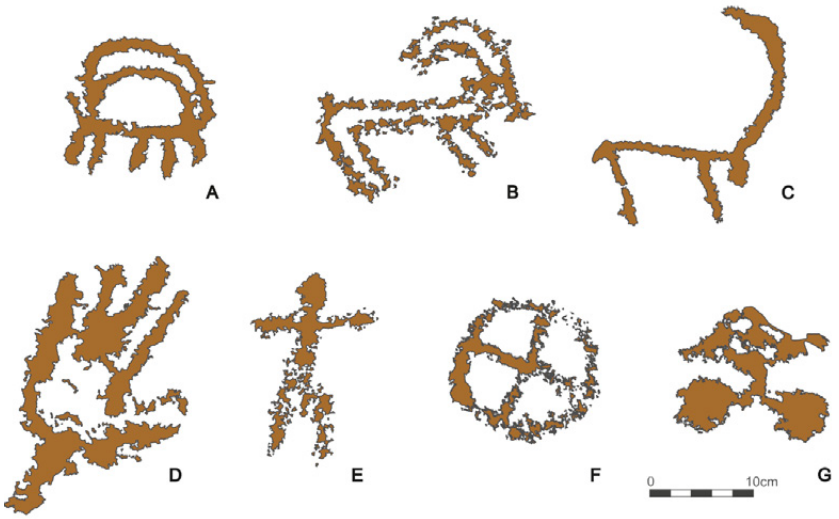

Figure 4. *Examples of petroglyphs from Kyzyl Dara 1 site.*

Petroglyphs

At least several types of representations are present at the site. Notably, the majority of petroglyphs are zoomorphs, mainly appearing to depict caprines (Figs. 4A–C). These are most often depicted in groups of several to several dozen individuals.

Apart from 'animal' depictions, engraved hand motifs are a well-represented group of petroglyphs (Fig. 4D). Sometimes they appear in pairs or seem to interact with other petroglyphs as a part of a scene. Only one anthropomorphous figure has been recorded so far (Fig. 4E). There are

also more abstract motifs such as circles with internal cross, or dots (Fig. 4F). In some cases, they are combined into more complex shapes (Fig. 4G).

Cupules (cupmarks) are the last type of human activity present on the rocks in the Kyzyl Dara gorge. However, they were noted only in a single small concentration so far. They are not deep, and their diameters do not exceed 2–3 cm (Bednarik 2008).

The sizes of the petroglyphs are relatively consistent within site. The vast majority of documented and observed depictions do not exceed several dozen square centimetres.

Conclusion

All petroglyph motifs from Kyzyl Dara gorge are present in other central Asian rock art sites (Martynov et al. 1992; Khujanazarov 2011 and 2018; Rogozhinskiy 2011; Vahdati 2011; Augustinová and Stančo 2016). The uniqueness of the site, however, consists of its exceptionally high number of motifs. Preliminary stylistic interpretation of the petroglyphs allows their tentative attribution to a period from the Bronze Age through the Iron Age and to modern times.

A huge concentration of petroglyphs is located near the pass between the two large and broad mountain valleys with an already quite well-examined settlement network starting in the Late Middle Palaeolithic (Pavlenok et al. 2019), through the Bronze Age (Kot et al. 2014; Szymczak et al. in press), up to modern times. Identification of the relationship between sites and the role of the Kyzyl Dara gorge within the local settlement network requires further detailed studies. One of the main quests remains: is Kyzyl Dara 1 the only such rich rock art site in the region?

So far, Kyzyl Dara 1 seems to be a rock art site placed at one of the highest elevations in central Asia. Recent discoveries show how high-mountain archaeology can shed new light into already well-studied topics.

Acknowledgments

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RAR 37-1337

Petroglyphs at Koh Elias and Chāh Langi in Isfahan, central Iran

By ABBAS ALI AHMADI

Fieldwork undertaken in summer 2019 led to the recording of two rock art sites. Elderly residents and shepherds directed us to a concentration of rock art featuring seventeen petroglyphs at Koh Elias and Chāh Langi. These sites are located close to 28 km from Shāhīn Shahr, Borkhār County, northwest of Isfahan City (Figs 1 and 2). The petroglyphs identified in this area were made on limestone and marble (that is grey or red due to haematite presence) surfaces of Koh Elias and Chāh Langi. The sites are situated among the central mountain ranges of Iran to the east of the Zagros Mountains and at an altitude of 1662 m. The climate is dry with very little precipitation. Nevertheless, the foliated structure of limestone and the high impact of weathering have resulted in the disintegration of some motifs. Koh Elias 1 comprises one pentagon-shaped block that had rolled down the slope. The petroglyphs are in danger of damage and erosion from the passage of local inhabitants and the high impact of weathering on the site. There is an urgent need to document and protect this site and this paper attempts to describe these petroglyphs.

This research included fieldwork/survey and the documentation of the data secured by the use of CorelDraw and Photoshop computer programs. The main technique used in producing these petroglyphs was rubbing and sometimes hammering. The images include zoomorphs (mostly purported to depict ibexes), anthropomorphs and geometric motifs, similar to those found all over central Iran (Naserifard 2007; Alian 2011; Zohori et al. 2011; Karimi 2013; Karimi and Ujang 2015; Estavi et al. 2016; Heydarian and Khosrowzadeh 2018).

The petroglyphs of Koh Eliās comprise two scatters of blocks labelled Koh Elias 1 (eastern) and 2 (western), which are located on the slopes of Mount Koh Elias. All of the panel 1 motifs are engraved on one pentagon-shaped stone block with dimensions of about 150 × 150 × 100 cm in height, length and width. Most of the motifs are close together on the south, east and west side of the boulder (Figs 2-1 to 3). On one side, there are two zoomorphs and three anthropomorphs (Figs 3-1 and 2). One of the anthropomorphs is engraved horizontally (Fig. 3-2) and two are seen on either side of the two 'ibexes' (Figs 2-2, 3-1). The second side of the boulder features four 'ibexes', one 'human figure' and one undefined motif. To the right are the three 'ibexes' (Figs 2-3, 3-3), in the upper corner, an undefined motif (Fig. 2-3); and to the left, there are the motifs of a 'human' facing an 'ibex' (Figs 2-3, 3-4). On the third side of the boulder is an engraved anthropomorph (Fig. 2-1, 3-5).

The motifs of panel 2 are created on the flat surface of an outcropping boulder, 140 m west of the eastern block (Fig. 2-4, 3-6). On the right of this boulder is the image of a quadrilateral object with four squares attached to a vertical line at the top (Fig. 3-6). On the left, there are two unknown 'objects' (Fig. 3-6).

The petroglyphs of Chāh Langi also comprise two scatters of outcrops, labelled Chāh Langi 1 and 2, 600 m apart. They are located about 4 km northeast of

Figure 1. *Map of Iran showing the locations of Isfahan province, and petroglyph sites.*

Figure 2. *Petroglyphs of Koh Elias 1 (1, 2 and 3), Koh Elias 2 (4), Chāh Langi 1 (5) and Chāh Langi 2 (6).*

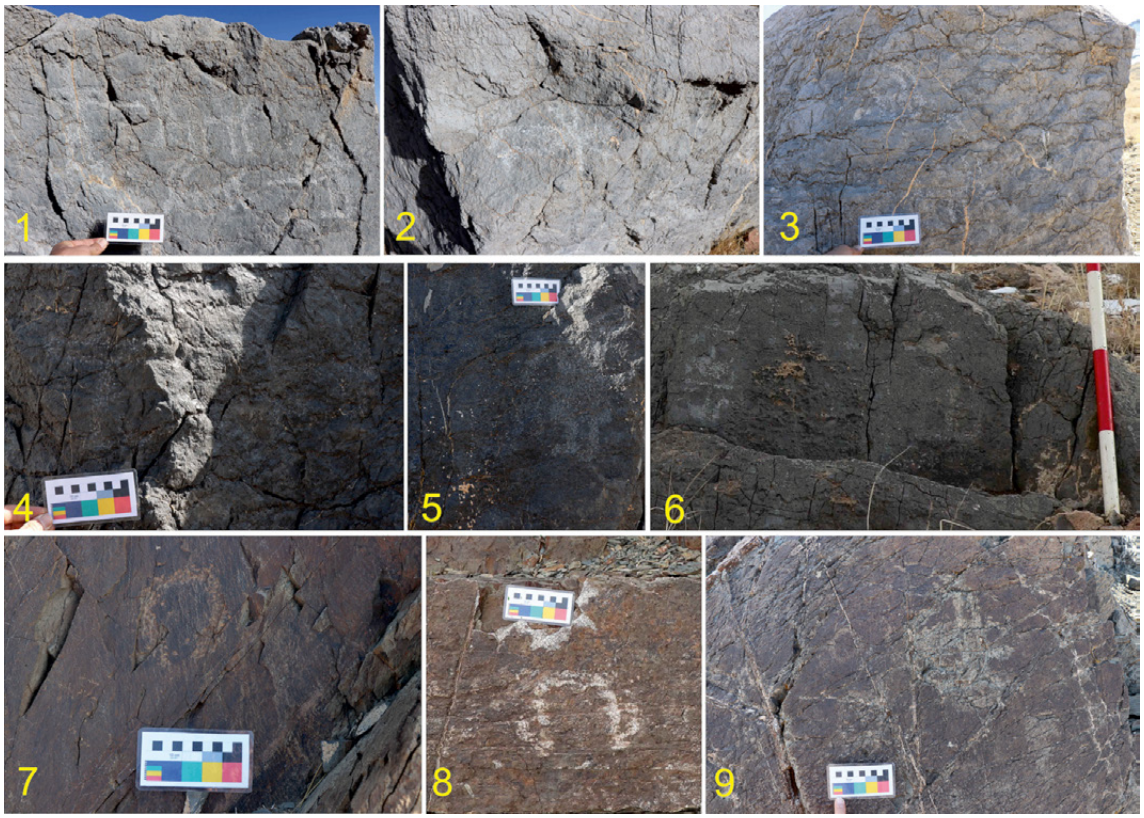

Figure 3. *Selection of petroglyphs, Koh Elias 1 (1–5) Koh Elias 2 (6), Chāh Langi 1 (7), Chāh Langi 2 (8 and 9).*

the Koh Eliās petroglyphs (Fig. 1). At Chāh Langi 1 (southern outcrop), there is just one geometric motif (Figs 2-5, 3-7), but at Chāh Langi 2 (northern outcrop), some geometric motifs can be seen in the two parts of the outcrop (Fig. 2-6). Circle, semicircle with two lines beside it, square and some obscure motifs are the most important elements in the second site (Fig. 3-8 and 9).

The anthropomorphs are schematised with a full body (Fig. 3-5), most rendered in a linear fashion with either narrow or thick lines (Figs 3-1, 2 and 4). The main animal motifs on the site resemble perhaps ibexes. They are depicted individually with different sizes and motions. They are shown with stylised, long (Figs 3-1 and 3) and short curved 'horns' (Fig. 3-3). The 'tails' come in two forms: short, dangling and curved or long and straight. The body is shown as a thin or thick line. The 'legs' are represented by four plain, vertical lines of different sizes, long or short.

Concerning patination and weathering, the depictions at these two sites can be divided into two different groups. The first and older group can be found at Chāh Langi, including geometric marks. The second group of depictions occurs at Koh Eliās.

The book *Dosafarnameh az jonoub* refers to this area as the hunting ground of the Mass'oud Mirza Zell-e Sultan (born 5 January 1850 in Tabriz; died 2 July 1918 in Isfahan), the Qajar ruler of Isfahan (Aledavoud 1989: 311). He was a Persian prince of the Qajar Dynasty and was posted as the Governor of Isfahan.

No scientific work has been conducted at these two new sites, and in the absence of any other archaeological evidence from the vicinity, the age of the petroglyphs remains unresolved. As with all other rock art regions of Iran, dating constitutes the most critical challenge also at Koh Elias and Chāh Langi.

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RAR 37-1338

Bānarwāna rockshelter: new-found rock art in Kurdistan province, western Iran

By AMIR SAED MUCHESHI
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In the last few years, a large number of petroglyphs and pictograms have been identified in Iran (Ghasimi 2007a; Ghasimi and Mohammadi Ghasrian 2011), including in Kurdistan province. This province in the west of Iran has a special place in archaeological studies. On the west, it borders Mesopotamia, on the north West Azerbaijan province, on the south, central Zagros, and in the east Hamadan and Zanjan provinces. The archaeological studies of this province are less developed than those of their neighbouring areas, but studies of rock art motifs have been better processed, and many researchers have introduced Kurdistan rock art (Lahafian 2004, 2010; Ghasimi 2007b). The research deals with 'identified' rock motifs, cupules and analytical issues (Mohammadi Ghasrian 2007).

Bānarwāna rockshelter

In summer 2012, while investigating shelters and caves in Kurdistan province in order to identify archaeological occupation remains (Saed Mucheshi 2012), sites from the Palaeolithic to the late Islamic period were located, including Bānarwāna rockshelter. The site is on the northern slope of a mountain called Hooraka, approximately 600 m southwest of Peshta Village in the southwest of Sanandaj (centre of Kurdistan province), western Iran (Fig. 1). Several cupules and other petroglyphs were identified.

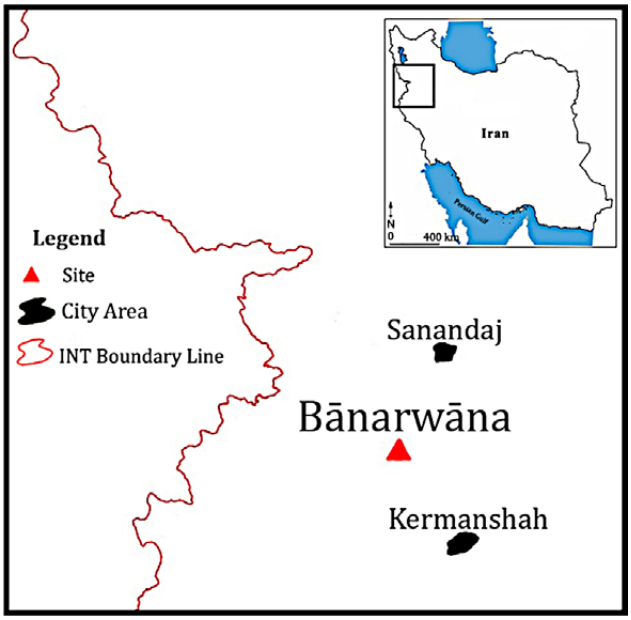

Figure 1. *Location of Bānarwāna rockshelter in western Iran.*

Bānarwāna rockshelter is located in a limestone outcrop, and its mouth is of oval shape and faces northeast (Fig. 2). The opening's height is 3.10 m, its width is 22 m, and the shelter's depth is 11.80 m, with a floor area of approximately 175 m^2. About 80% of the rockshelter floor is of bedrock, 20% is covered by fine sediment and livestock dung (sheep and cattle), located at the end of the rockshelter and approximately 1 m below its front part. At the northern end of the rockshelter, an opening 150 cm wide and 120 cm high has a 60 cm high rock outcrop leading to a small hall facing west. The roof of the rockshelter has cavities (skylights) in three places.

Furthermore, 3 m from the rockshelter's mouth, there is a rock on the south side of the shelter, 150 cm long and 60 cm high separating the sedimentary part from the other parts. There are four large boulders in the middle of the mouth. The outer slope is a combination of sediment and rock with a gradient of approximately 13 degrees, at the time of the survey covered by dense seasonal grasses. The nearest sources of water to the site are a small seasonal spring and a seasonal stream located approximately 500 m north of it.

On the right-hand floor of the rockshelter, which is entirely rocky, there are 15 bedrock mortars and cupules of various dimensions (Figs 3 and 4). The cross-sections of seven of them are U-shaped, and the rest is V-shaped (Table 1). There are six petroglyphs among the erratically excavated mortars. These motifs consist of two sets; set A has one motif and set B has five. The location of the motifs is specified in the shelter plan (Fig. 3). Motifs 1 to 3 of set B are three adjacent zoomorphs, two of which face in one direction and the other in the opposite direction (Fig. 5). The engraved 'animals' are almost alike except that two of the motifs have an upward 'tail'. Moreover, two images of these

Figure 2. *Bānarwāna rockshelter.*

No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Depth	9	14	9	9	6	4	9	4	6	6	5	5	7	5	9
Diameter	20	22	14	13	12	9	14	8	11	11	10	10	13	10	12
Section	U	U	V	V	U	U	V	U	V	V	U	U	U	V	V

Table 1. *Dimensions and shapes of cupules and mortars on the floor of Bānarwāna rockshelter (in cm).*

three motifs have two ears or horns. Motif 4 is a 'rider on' a quadruped and 'holding its tether'. Motif 5 of set B and motif A are not identifiable (Fig. 6).

The motif of the purported rider is similar to an abstract motif near Birwas Village, northwest of Nowdshah, which is located about 73 km to the northwest of Bānarwāna (Lahafian 2015: Fig. 3). Some other Birwas Village motifs are similar to Bānarwāna motifs in style, shape and theme (ibid.: Figs 4 and 5). In Kurdistan province, collections of cupules and mortars have already been identified in several different areas, some of which have numerous cupules and mortars. Examples like the Asl-Ga shelter specimen (Lahafian 2010: Fig. 5) are

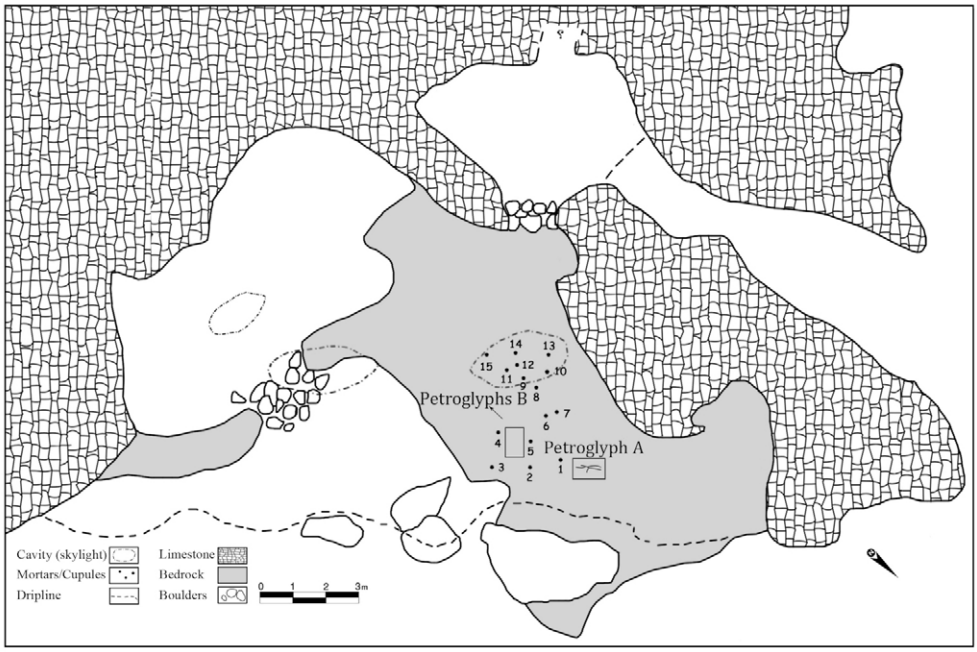

Figure 3. *Plan of Bānarwāna rockshelter with the positions of mortars, cupules and petroglyphs on its floor (with thanks to Fereidoun Biglari).*

Figure 4. *Petroglyph and mortars of the shelter floor.*

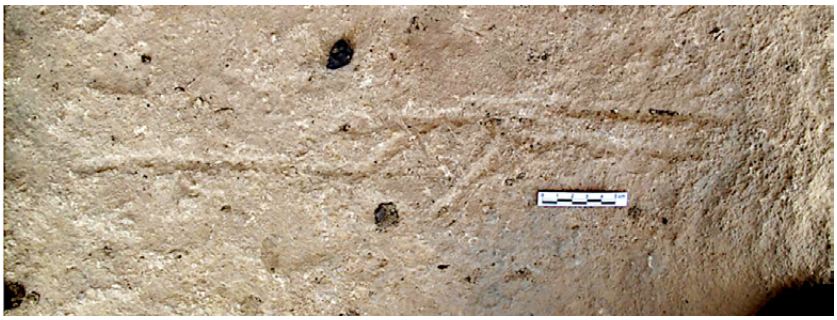

Figure 5. *Image of set A in Bānarwāna rockshelter.*

Figure 6. *Images of set B in Bānarwāna rockshelter.*

similar to Bānarwāna specimens, but none of them provided dated evidence.

A survey of Bānarwāna slope revealed several archaeological finds, including 16 lithic artefacts and three pottery shards. The lithic assemblage includes 12 flakes, broken flakes, flake fragments and two blade fragments. Retouched tools are one end-scraper and two atypical end-scrapers, one notched blade and one scraper. The lithic artefacts can be attributed to the Epipalaeolithic and probably Chalcolithic periods (F. Biglari, pers. comm. 2012), and the ceramics to the Chalcolithic period. Three potsherds were obtained from this site, and they are characterised as handmade, fine to medium, buff, well-fired, chaff tempered and their surfaces were heavily weathered and abraded. Also, a part of a grinding slab was found.

Conclusion

In Bānarwāna rockshelter, several cupules and other petroglyphs were identified on the floor of the shelter, indicating the use of this site for processing vegetal material. Also, there are other cultural remains, such as pottery, lithic artefacts and part of a grinding slab. These were all found on the slope in front of Bānarwāna. Dating of rock art is uncertain and problematic in Iran. Here, we can only mention the lithics and pottery collected from the slope of Bānarwāna rockshelter that can be relatively dated, but the relationship between these surface finds and petroglyphs and mortars/cupules cannot be tested at present. The motif of the presumed rider would require the presence of a domestic animal associated with porterage and riding, of which there is no evidence in the pre-Historic period. The presence of the domesticated horse in the Godin III layers at Godin Tepe shows that horse was utilised in the west of Zagros during the 2nd millennium BCE (Gilbert 1991; Mashkour 2003).

The nearest sheltered sites to Bānarwāna are Koulian and Dalan caves, located about 10 km to the southwest of the site. These sites yielded final Pleistocene and early Holocene archaeological remains (Biglari and Taheri 2000).

Evidence from the Bānarwāna rockshelter indicated that the site was occupied during the Chalcolithic period, as shown by potsherds and lithics. The presence of a 'rider' motif in the rock art implies that the site was also used during Iron Age to Historic periods. Therefore, it is probable that the petroglyphs and cupules were created in different periods by different late pre-Historic and Historic groups of nomads and herders who used the shelter on a seasonal basis.

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RAR 37-1339

Kimberley critters: objects, lines and 'animal associates' in Gwion period rock art

By MICHAEL P. RAINSBURY

Gwion period rock art of north-west Australia (the so-called Bradshaw figures) is renowned for its depictions of human body adornment and associated material culture allowing researchers to compile a relative chronology (Walsh 1994, 2000; Welch 1993, 2015). This article arises from research into regionality in Kimberley rock art (Rainsbury

2009, 2018) where a particular sub-style, tassel figures, have, within a limited geographical area approximating to the Drys-dale River catchment (Fig. 1), depictions of objects, barred lines and small zoomorphs positioned by the figures' heads (Fig. 2).

The first account of 'associated animals' was by Joc Schmiechen arising from the 1986 Operation Raleigh Drysdale River Expedition and his subsequent visits (1986, 1993). First, a site with two figures sandwiched by two possum-like zoomorphs was discovered (Schmiechen 1986: 6, 1993: 17), and Barten and Tony's Gallery recorded later (1993: 26, 33–34), the latter two having small zoomorphs positioned by the figures' headdresses (Walsh

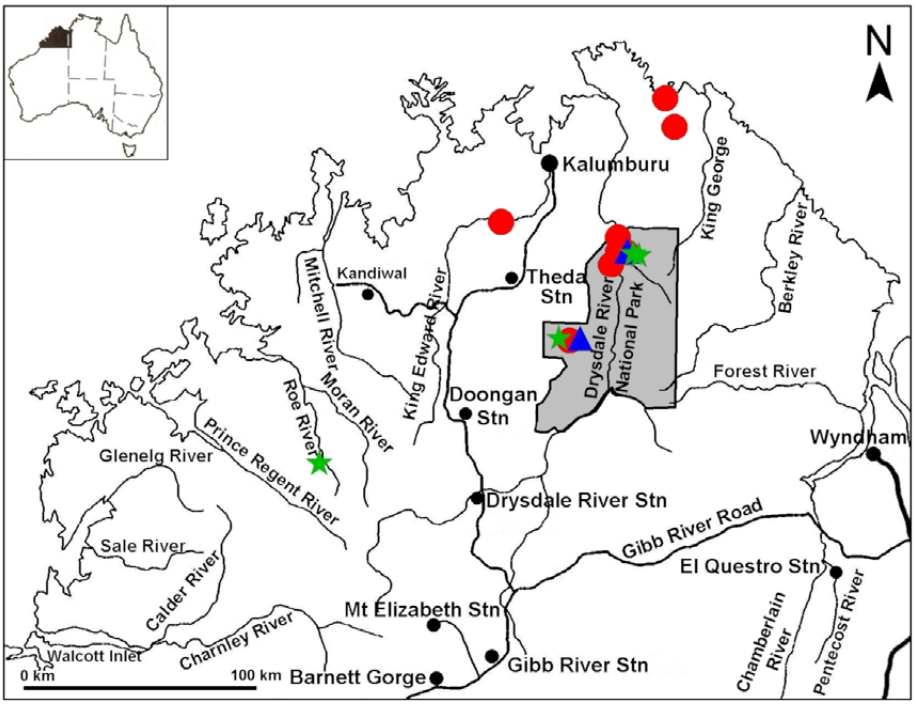

Figure 1. *Map of the Kimberley showing regional distribution of associated objects, lines and zoomorphs. Key: green stars - objects, blue triangles - lines; red circles - zoomorphs.*

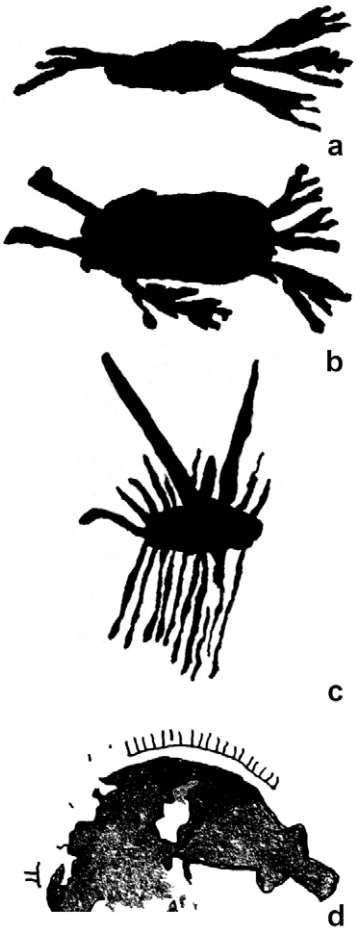

Figure 3. *Associated 'ceremonial objects': (a) site DR07-14, (b) site DR07-63, (c) site DR07-45, and fringed line (d) site DR07-62a.*

Figure 2. *The Royal Family panel of tassel figures with associated 'animals' (FAB07-15).*

2000: 320, Pl. 501). David Welch published a revised rock art chronology and illustrated an example of tassel figures with small animals besides their heads (Welch 1993: Fig. 3). Grahame Walsh also showed associated objects, lines (barred and half barred) and zoomorphs (1994: 108, 120–137) found with a particular type of tassel figure, what he called ceremonial figures, and described as an 'over decorated form of the "classic" Tassel Bradshaw' (2000: 321).

There are three classes of associated objects and animals. The first is an oval object, resembling a rugby ball in relative size and shape, portrayed with tassels, projections or fronds, usually located near the head of the figure (Fig. 3a–c). Walsh named it a 'ceremonial object' for want of any other information (2000: 331), though David Welch questioned whether it might represent a paperbark bundle holding firesticks, magical or ceremonial sticks (pers. comm.). The next class of object is a line, barred or with a fringe on one side, which lies over, but not touching, the headdress, and may extend over the face of the figure (Fig. 3d). Walsh named the barred line the 'half tram track feature' and the fringed line the 'half centipede feature' (2000: 321).

The final class is 'associated zoomorphs', the 'Kimberley critters' of the title. The 'animals' adjacent to or touching the headdresses are thought to depict small

marsupials (Fig. 2). Rarely are they shown in front of the face and even more rarely by the body or legs, though there are exceptions (Welch 2015: 211). However, they are painted too small for any diagnostic details to be recognised (Fig 4a–c).

David Welch consulted Kimberley and Arnhem Land Aboriginal people for explanations of the material culture depicted (1996). An eastern Arnhem Land man identified an associated animal as a possum and the barred line being possum fur string, decorated string being a feature of some ceremonies. Welch wrote that, although from a different area, the informant saw 'a level of meaning that would not be apparent to the casual observer' (Welch 1996: 112).

This level of meaning may be the key to understanding associated figures. Walsh regarded them as being 'a symbolic identification key to some role of the associated figure' and that they may represent 'status, clan or "religious" identification' (Walsh 2000: 331). Welch agrees and wrote that the associated animals are possum-like, and if the same in all scenes 'would indicate it took on a certain importance, and further supports the argument there may have been one ceremony centred around a specific animal story' (Welch 1996: 112).

Walsh thought the animal depicted is the rock wallaby, *warabi* (*Petrogale burbidgei*) (1994: 43), now renamed monjon, whereas Welch (2015) points out identification must allow for artistic licence and whether the animal is depicted in the same ratio as the human figure. If so there is a variety of possible contenders which he goes on to list, such as the antechinus, Kimberley mouse, delicate mouse, planigale rock rat, field rat, tree rat or quoll. If the animal figures are painted smaller than life-size, then the possum and rock wallaby are possibilities (2015: 211).

Examples offered in the literature predominantly come from sites on the Drysdale River. This is in accordance with my research data (Rainsbury 2009). Mike Donaldson's photographic overview of Kimberley rock art by river system (2012a, 2012b) show associated animals on the Drysdale River and the north coast, with two outlier sites on the King Edward River (2012b: 353, 377), and a 'ceremonial object' outlier on the Roe River (Fig. 1). Again all occur with tassel figures. Of Walsh's seventeen plates, seven are unfamiliar and show three 'ceremonial objects', three barred lines and one 'associated animal' (Walsh 2000: 321–330).

In the area stretching from the heart of Drysdale River National Park to the north coast (Fig. 1), encompassing 275 sites recorded by myself, I am aware of fourteen sites with tassel figures exhibiting either a 'ceremonial object' (n=3), lines, either barred or half-barred (n=4), or with associated animals (n=7). By including Walsh's sites and Donaldson's outliers, the totals are seven with 'ceremonial objects', seven with lines, ten sites with animals and one site with both an associated line and animals. Out of the corpus of Kimberley Gwion rock art, this is a small occurrence and appears predominantly regional.

Tassel figures are portrayed wearing the *mudara* headdress either falling over their shoulders or stretching out behind (Welch 2015: 191). The associated zoomorph is usually placed over the headdress so its head faces uppermost (Fig. 2). Usually, one 'animal' is painted, but in some instances, two are present and rarely three or more (Walsh 2000: Pls 501, 502).

There are at least two types of 'animal associates'. One has a more rodent-like head, thinner body and a long tail, often ending in a tuft (Fig. 4a–b), the other with a squatter head and body, and a more curled tail (Fig. 4c). The former two are tentatively identified as the small rock wallaby, monjon, the latter a possum, but we must be aware of caveats in attempting identification of depicted species (Brandl 1972 in Lewis 2017: 82–83).

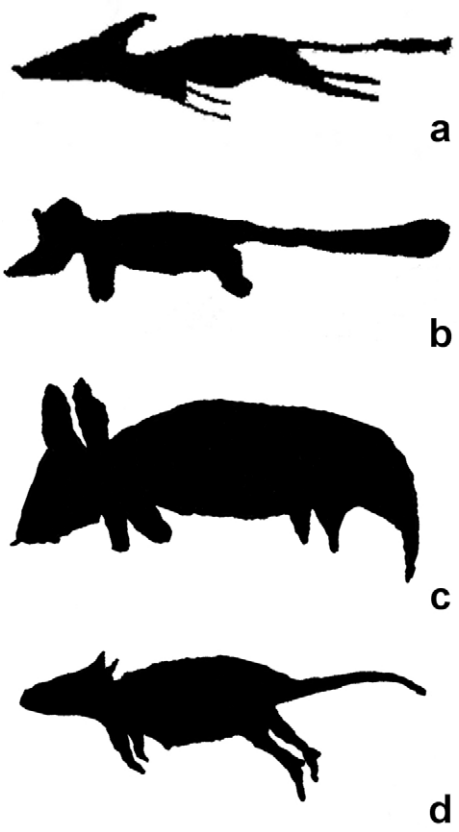

Figure 4. *Associated animals. (a) From Dotted Macropod site, DR09-04. (b) One of a pair from Tony's Gallery, DR11-04a. (c) From the Royal Family panel, FAB07-15 (Fig. 2 above). (d) Donaldson's Planigale Creek zoomorph (2012b: 202–203). (All rotated ninety degrees anticlockwise.) Figs. 4a, b & d may represent the monjon, 4c a possum.*

A Planigale Creek photograph revealed a solitary animal painted vertically, with a rodent-like head, rounded body, longer hind legs, and a long, slightly rounded tail (with obscured tip) (Donaldson 2012b: 202) (Fig. 4d). This does seem to represent an isolated example of one of the animals under discussion, the monjon; but in this example, it is painted on a panel of sash / bent knee figures and not associated with any of them.

The presence of 'associated' objects, lines and 'animals' has a limited geographical distribution in the Kimberley, but are they to be found elsewhere? Arnhem Land's dynamic period rock art is the best candidate,

and associated zoomorphs have been reported by Chippindale et al. (2000) in their investigation into the representation of altered states of consciousness amongst dynamic figures. They offer three examples: a bird, flying fox (fruit bat), and a small dog-like animal (probably a thylacine), each interacting with dynamic anthropomorphs, not placed adjacently in a presumably symbolic manner. They are 'spirit familiars', exhibit spiritually derived power, *marr* (ibid.: 83, 87), and illustrate that we are dealing with the world of the supernatural (ibid.: 71). As such, the Arnhem Land examples do not match what is observed in the Kimberley.

In conclusion, research into regionality amongst Gwion period rock art reveals the presence of 'associated' objects, lines and animals with tassel figures, located predominantly in a band of country following the catchment of the Drysdale River from one hundred kilometres inland to the north coast. Based on informed east Arnhem Land interpretation, they are thought to have a ceremonial aspect. The barred lines may depict an actual string and the 'ceremonial objects' paperbark bundles of firesticks or ceremonial sticks. As for the 'animals', the 'Kimberley critters', at least two marsupials appear to be depicted, the monjon and possum. In this part of the Kimberley, the regional associations depicted may represent some form of identification, be that 'status, clan or religious' (Walsh 2000: 331).

Acknowledgments

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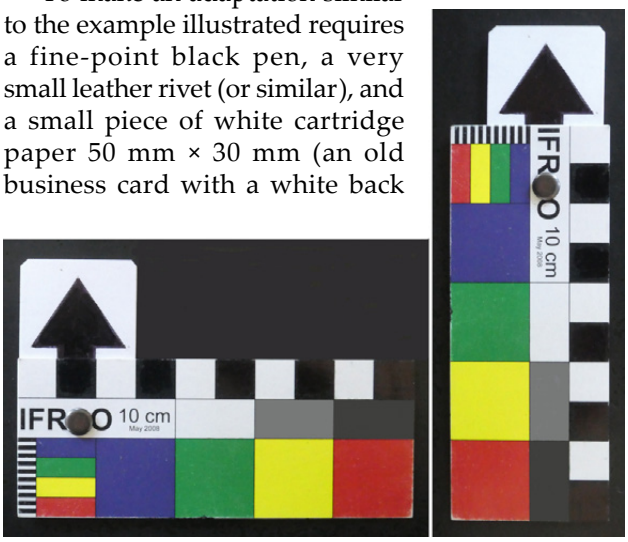
RAR 37-1340

Orientating the IFRAO Standard Scale

By DARRELL LEWIS

Most rock art researchers would be aware of instances where photographs of rock art have been published upside down and no doubt some would occasionally wonder which way a photograph they had taken should be oriented. To help avoid this problem, a movable arrow can be fixed to the IFRAO Standard Scale. Fixed in the right way, such an arrow can be swung at right angles so that whichever way the scale is oriented the arrow can be turned to face up, as the accompanying photographs show.

To make an adaptation similar to the example illustrated requires a fine-point black pen, a very small leather rivet (or similar), and a small piece of white cartridge paper 50 mm × 30 mm (an old business card with a white back



can be cut to size). An arrow about 25 mm long × 18 mm across the base should be drawn on the top half of the cartridge paper and filled in with the black pen. This arrow should have a 'shaft' 10 mm wide to match the divisions on the scale and extending into the other half of the paper. Next, a hole large enough for therivet should be made through the middle of the 'A' on the scale. The long edge of the paper with the arrow should be aligned with the edge of the end of the scale, with the shaft of the arrow lined up with the second division on the scale and extending about 4 mm above the top of the long side. The paper should then be marked through the hole in the scale, and a hole made in it to suit the rivet. Making sure the arrow is the right way around, the rivet can be passed through both pieces and tapped with a hammer to fix them together. Of course, researchers might find another way to fix an arrow to the scale. Hopefully, IFRAO Scales with such an arrow attached might eventually be factory produced.

Dr Darrell Lewis

RAR 37-1341

RAR Review

RECENT ROCK ART JOURNALS

International Newsletter of Rock Art. Newsletter of the Association pour Rayonnement de l'Art Pariétal Européen (ARAPE). Edited by JEAN CLOTTES. Bilingual newsletter (French and English). Recent issues include these research articles:

Number 86 (2020):
VAN HOEK, E. and M. VAN HOEK: New petroglyphs near Icht, southern Morocco.
HERMAN, L.: Two new rock art sites at Amaoun (Akka, Anti-Atlas), Morocco.
MEDINA-ALCAIDE, M. Á. Et al.: 'Los Márquez' Cave: an unknown rock art site in Andalusia.
HERMAN, L., A. DEKASTLE and M. FOGGIN: The rock art of the Karakol Region (Tchouï and Naryn Oblast) in Kyrgyzstan.
GELLIOT, É., P. COSTA, P. MUÑOZ and M. KÜNNE: Digital aquisition [sic] techniques for the study of Costa-Rican rock art. The case of Pedregal in the Guanacaste Cordillera.

Purakala. Journal of the Rock Art Society of India (RASI). Edited by GIRIRAJ KUMAR. The most recent issue contains these research and review papers:

Volume 29 (2019):
KUMAR, G.: Rock art discipline: the way ahead.
RAO, K. G., S. HARAGOPAL, K. S. RAO and V. MURALIKRISHNA: Identification of natural pigments used in rock paintings in Telangana with Raman spectroscopy.
HRIDAYSHRI: Stone Age rock art and communication design: a preliminary study.
ABHIMANYU, N. RAGHUVANSHI and G. KUMAR: The roots of Indian culture: perspectives of rock art and Vedic literature.
OTA S. B., N. SRIVASTAVA, S. PANDEY and R. KUMAR: A newly discovered group of painted rock shelters at Silari, District Raisen, Madhya Pradesh.
TIWARY, S. K.: Rock art in Kaimur region, Bihar: a study.
PRADHAN, A.: Museums and rock art education in India: some thoughts.
POOJARI R. A. and P. R. CHAUHAN: Preliminary report of a new rock art site-complex at Mandikhoh in the Hoshangabad district, Madhya Pradesh.
BHATT, P. K.: Mass awareness expeditions for protection and promotion of rock art heritage in Chambal valley: some observations.

American Indian Rock Art. Monograph series of the American Rock Art Research Association (ARARA). Edited by KEN HEDGES and ANNE McCONNELL. The most recent issue features these papers:

Volume 45 (2019):
KAISER, D. A. and J. D. KEYSER: Looking north: the origin of the vertical series tradition.
KEYSER, J. D. and S. J. LYCETT: Blackfoot artists on the Kevin Rim, Montana.
MINICK, D. L. and J. D. KEYSER: Eagle Creek Canyon horses: a typology of calling card rock art sites.
LOENDORF, L., C. GRINNELL and A. BRIEN: The lodge boy and spring boy tale as depicted at Hole in the Wall, Wyoming.
ROGERS, A. K. and R. M. YOHE II: A western anabasis as the origin of Coso rock art, eastern California.
STERKEN, C.: Some thoughts on stellar constellations in petroglyphs.
HERNBRODE, J.: Rock art after the Hohokam: elements, style, and continuity of the Tohono O'odham at Cocoraque Butte.
ASTROTH, K. A.: Elusive, enigmatic labyrinth glyphs of the American Southwest.
STEELMAN, K. L., E. DILLINGHAM, M. K. BERRIER, L. N. BATES, R. MARK and E. BILLO: Radiocarbon dating the Guadalupe red linear style in the Guadalupe Mountains, New Mexico.
BERRIER, M. K.: Isolated beauty in Lower Broad Canyon, New Mexico: 2017 rock art recording at LA 69645.
KOENIG, C. W., A. M. CASTAÑEDA, V. L. ROBERTS, J. L. ROBERTS C. E. BOYD and K. L. STEELMAN: Around the Lower Pecos in 1095 days: the Alexandria Project.
JENKINSON, R.: A close look at the Great Gallery.
ANICK, P.: Shamans, sachems, or selfies: the carved hands of southeastern New England.
BOHNTINSKY, D.: Rock art dilemma: to chatter or not to chatter.

Bay Area Rock Art News. A publication of the Bay Area Rock Art Research Association. Edited by LEIGH MARYMOR. Recent papers include:

Volume 36, Number 2 (2020):
MARYMOR, L.: 'The young man transcended quickly': a western message petroglyph update.
STOLL, A.: Rock art of Brazil.
MARYNOR, A. L.: Side lighting the rock art of Fontainebleau, France.

IFRAO Report No. 62

New members of IFRAO

The **Groupe d'Études, de Recherches et de Sauvegarde de l'Art Rupestre** (GERSAR) of France was founded in 1975 and is an association of passionate volunteers whose main missions are to inventory and study rock art. Although they carry out most of their prospecting and research in a geological and environmental zone known as the Massif de Fontainebleau (where more than 2000 engraved shelters have been identified), they also study rock art outside that region. GERSAR has published 73 issues so far of the journal/newsletter *Art rupestre* (*Rock Art*), as well as occasional focused studies and monographs. The association is currently striving to focus more of its attention and analyses on safeguarding the exceptional sites it studies, since that heritage is highly threatened by such phenomena as erosion and damage caused by visitors. The forests, where most of the rock art is located, become increasingly crowded due to tourism. The association's current officers are: Yves Mérian, President; Sylvain Lenoble, Treasurer; Paulette Corme, Secretary General; Laurent Valois, Publications, Prospecting and Inventory-Review Officer; Jacques Sagot, Webmaster; Alain Tourvieille, Librarian and Archivist.

The nominated IFRAO Representative is Duncan Caldwell, P.O. Box 724, Chilmark, MA 02535, U.S.A.; *paleothought@yahoo.com*.

The newly formed **Asociación de los Valles Cruceños de Arte Rupestre** (Rock Art Association of the Santa Cruz Valleys, AVCAR) has been founded on the basis of the exhaustive work of local rock art researchers Clovis Cardenas and Arnulfo Lino, who have documented 51 rock art sites in these beautiful valleys of Bolivia. AVCAR has been founded as a very necessary institution in this region, which includes the World Heritage Site El Fuerte, with the participation of rock art researchers and an archaeologist of the local archaeological museum. AVCAR has its own constitution ('estatutos') and regulations. Its objectives are based on research, documentation, protection and conservation, and the implementation of projects with local participation, as well as public education about rock art in the schools in these valleys. AVCAR has a solid basis with numerous rock art sites in its care and the researchers and administrators involved. The Board of Directors of AVCAR comprises: Prof. Roy Querejazu Lewis, President; Giovanni Guidetti Reyes, Vice President; Arnulfo Lino, General Secretary; Jaquelin Mendez, Treasurer; Luis Callisaya and Leonid Lino, Board Members.

The nominated IFRAO Representative is Prof. Roy Querejazu Lewis, AVCAR, Casilla #2992, Santa Cruz de la Sierra, Bolivia; *avcarsam@gmail.com*.

The newly formed **Georgian Association of Rock Art** (GARA) is an organisation just established by Georgian archaeologists. GARA is dedicated to locating, studying and preserving rock art sites in Georgia. The reason why it was decided to establish such an organisation was the recently activated interest in rock art sites in Georgia. Two important events were catalyst of this reactivation, namely, Georgia became a member of 'Prehistoric Rock Art Trails' represented by the site of Trialeti petroglyphs; and second, GARA's team rediscovered the first painted rock art site ever found in Georgia. Therefore, the objectives of GARA are to survey and reveal more rock art sites; manage a database and monitor sites; submit them to provide heritage status to be protected by law; and collaborate with international organisations in rock art preservation, research and exchange of experiences. GARA admits new members without discrimination. Its Board of Directors comprises: Levan Losaberidze, MA, President; Mariam Eloshvili, MA, Vice-President; Magda Batiashvili, MA, Secretary; Tamar Aghapishvili, PhD, Treasurer.

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