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PETROGLYPHS WITHIN THE WĀDĪ RAGHWĀN, MA'RIB GOVERNATE, REPUBLIC OF YEMEN: LOCATIONS, PECULIAR ICONOGRAPHY AND INTERPRETATIONS

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ABSTRACT

During the 2006 field season of the Wadi Raghwan Archaeological Project (WRAP) over a hundred examples of petroglyphs were encountered by the survey team in the Wādī Raghwān drainage basin within the Ma'rib Governate, Republic of Yemen. While most of the petroglyphs exhibit iconography that is common throughout Arabia, four specific genres, each in different locations, stand out as particularly striking among the repertoire of rock art known in the Yemen and adjacent countries. Three of the genres have parallels elsewhere within Arabia, although the details of their rendering are rather different. The locations and contexts of all four suggest specific landscape relationships and symbolism; one seems to represent person-to-person combat, another seems to have a special symbolic or "cultic" value, and two locations seem to have likely associations with camel caravans. The fourth genre belongs to a genre best described as a "cognitive map", and its parallels are rare within Arabia.

KEYWORDS: rock art, petroglyph, Wadi Raghwan, re-patinization, anthropomorph, zoomorph, camel, cognitive map

1. INTRODUCTION

Prior to the 1980s very few examples of rock art had been documented elsewhere in the Yemen. The reconnaissance surveys within the Wādī al-Jubah, south of Ma'rib in the Yemen, revealed a few petroglyphs (*e.g.,* Grolier 1988: 334, fig, 11.10), while other examples have not been published. A pictograph depicting an anthropomorph is known in the Wādī al-Dhana upstream from Ma'rib, while a cave along Jabal Balaq south of Ma'rib is said to contain many pictographs (Grolier and Northey, personal communications 2001), but none have been studied. The first comprehensive attempt to locate rock art in the Yemen was undertaken by Michael Jung of the Italian Mission published in the 1990s (Jung 1991a; 1991b: 255-258). Jung's work has been instrumental in calling our attention to numerous examples of petroglyphs, many of which were previously unpublished, and in creating distribution maps for them (Jung 1991a: 31-32, fig. 23; 1994a: 137, fig.1). To Jung's plot we must add the many examples encountered by the Wadi Raghwan Archaeological Project (WRAP) during the first field season conducted in 2006.

2. THE LOCATION OF THE WADI RAGHWAN

The drainage system of the Wādī Raghwān and adjacent area in the work permit of the WRAP occupies a region of about 800 square kilometres. The location of this region is approximately 40 kms WNW of the Old City of Ma'rib, which is the ancient capital of the Sabaean Kingdom. Today the Wādī Raghwān is one of the administrative districts that form the Ma'rib Governate in the Republic of Yemen (Grolier and Overstreet 1978; Robin and Brunner 1997). The drainage system flows northward along the east side of a low rise of Quaternary sediments and then turns NNE at its mouth and flows into the wide and deep Wādī al-Jawf, which itself flows from west to east and disappears into the Ramlat al-Sab'atayn. To the east are volcanic cinder cones.

3. PREVIOUS EXPLORATIONS IN THE WĀDĪ RAGHWĀN

In 1870 Joseph Halévy became the first western scholar to report on the location of the site of Khirbat Sa'ūd while *en route* from the Jawf to Ma'rib. Henry St-John Bridger Philby was the next scholar to explore the site in the early 1930s, when he also discovered nearby al-Asāḥil (Philby 1939: 399-409). Hermann von Wissmann (1964: 212-238, abb. 6, 7) published plans of the sites based upon Philby's site descriptions and provided some commentary on several of the pre-Islamic inscriptions that Philby found as well as on the significance of the sites in general (von Wissmann 1976: 323-324, 352, 428-429; 1982: 99-112, 287-302).

In 1980 Christian Robin and Jacques Ryckmans published the inscriptions from the two major pre-Islamic sites, Khirbat Sa'ūd is ancient KTLM (Kutalum), and al- Asāḥil is ancient 'RRTM ('Araratum), and some inscriptions re-cycled into the masonry of structures at the Islamic site of ad-Durayb. Those inscriptions mention Karab'il Watar, a Sabaean *mukarrib* and son of Dhamar'alay, engaged in some construction activities at 'RRTM and repeatedly at KTLM. The Sabaean *mukarrib* Yitha'amar Bayyin, son of Sumhu'alay, also engaged in some construction activities at 'RRTM (Robin and Ryckmans 1980; Robin and Breton 1982; Breton 1994: 81; von Wissmann 1982: 105-112, 287-301). While their title *mukarrib* is best translated as "confederator" (Robin 1996: col. 1048, 1089), their reigns are not yet firm, and vary between ca. 1000 or 900 BC to the 8th or 6th century BC (Kitchen 1994: 111, 242; 2000: 744; Robin 1996: cols. 1113-1126; Breton 1994: 153; von Wissmann 1976: 323-324, 329-333, 352, 504, Tafel I). Furthermore, both Karab'il and Yitha'amar are common, repeating dynastic names. These dynastic names are mentioned in the Annals and other texts of the Assyrian kings Sargon II, reigning 721-705 BC (Luckenbill 1989: 7-8) and his son Sennacherib, reigning 704-681 BC (Luckenbill 1989: 440), where their names are rendered as Karabi-ilu and It'amar, "kings" of Saba'. Regardless of the identity of the invoked rulers, the Wādī Raghwān lay with the Sabaean kingdom for at least part of the first millennium BC.

4. THE WADI RAGHWAN ARCHAEOLOGICAL PROJECT (WRAP)

The WRAP was initiated in 2005, and in the summer of 2006 we undertook the first field season of archaeological exploration. Given the size of our concession, our fieldwork consisted of an initial surface reconnaissance survey and documentation of locations of special interest for detailed exploration in subsequent field seasons, starting from Asdās and moving southward. We encountered 34 localities of interest, all of which are archaeological sites (Glanzman and Rempel 2006).

A "Locality" is a geographical place of interest, whether from an archaeological (designated "A" followed by the sequential number of the site), Geological (initially designated as "G"), or other environmental (originally designated as "E") perspective. Each site number is assigned in the order in which we encountered them. In cases where more than one part of the landscape is of special interest, the specific iconographic entity is given a sequential number

in the order encountered, separated from the site number by a dash; for example, Locality A 31-17. In cases where there are several isolated items such as petroglyphs or inscriptions, another dash providing a distinct identity is followed by a sequential number in the order in which they were encountered. Due to political situations, however, the project has been unable to return to Yemen since 2006, so a detailed study of all of the localities has not been possible.

Over a hundred examples of petroglyphs were encountered and recorded in a preliminary manner (Fig. 1). Some are clustered around pre-Islamic or Arabic inscriptions and graffiti, while others are found in rock quarry sites. Yet the most intriguing examples are either adjacent to or within major pre-Islamic archaeological sites and have no association with Arabic inscriptions and graffiti (Glanzman and Rempel 2006).

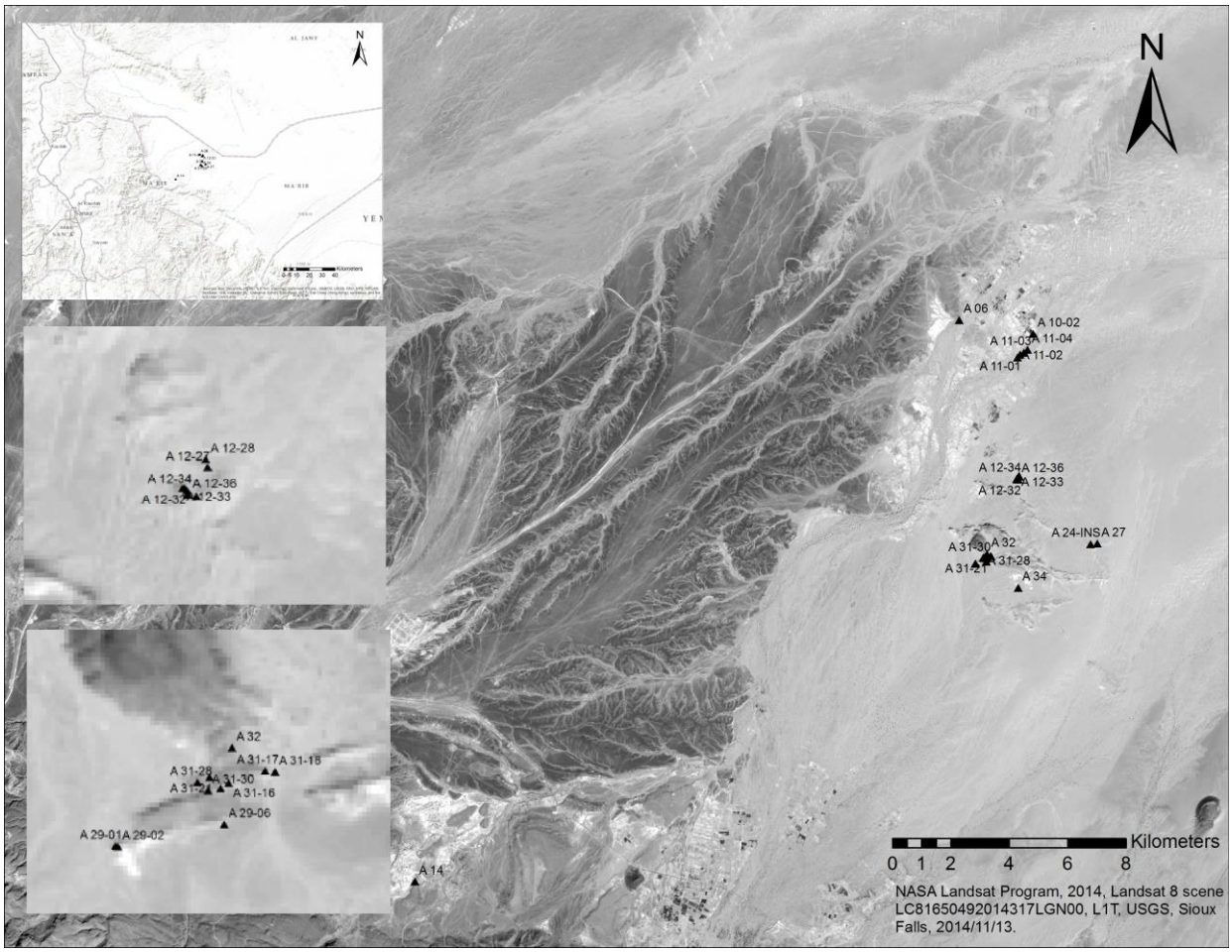

Figure 1 Map showing the spatial distribution of both archaeological and petroglyph sites in the Wādī Raghwān.

5. LOCALITY A 27

Locality A 27 is a petroglyph on the south face of a boulder along the northeastern portion of a complex archaeological site, designated as Locality A 24 (Fig. 2). This latter site occurs atop a low rock outcrop, and comprises a low stone perimeter wall with a series of small, irregularly shaped low walls of stone that contain smaller burial cairns within them. The interior of the complex is devoid of features visible at the surface. On the site's surface are found potsherds of a type now known as the "South Arabian Amphora" (Porter 2004). In addition, some sherds similar to the "Grit Ware" of the Bronze Age are also found nearby (Blakely, Vitaliano and Brinkmann 1996: 316-326; Glanzman 1994: 262-270, pls. 3:49, 3.50). A sand-blasted handaxe of possible Upper Palaeolithic date was also found (Glanzman and Rempel 2006: 23, 30, 31). The boulder is positioned east of the northern entry point into the complex, and further north of that entrance lies Locality A 33, a stone alignment 36.47 m in length and oriented WSW-ENE; at both ends of the alignment are two small circular cairns, possibly containing burials. The western cairn is approximately 5.0 m in diameter (A 33-01), the eastern approximately 2.10 m in diameter (A 33-02).

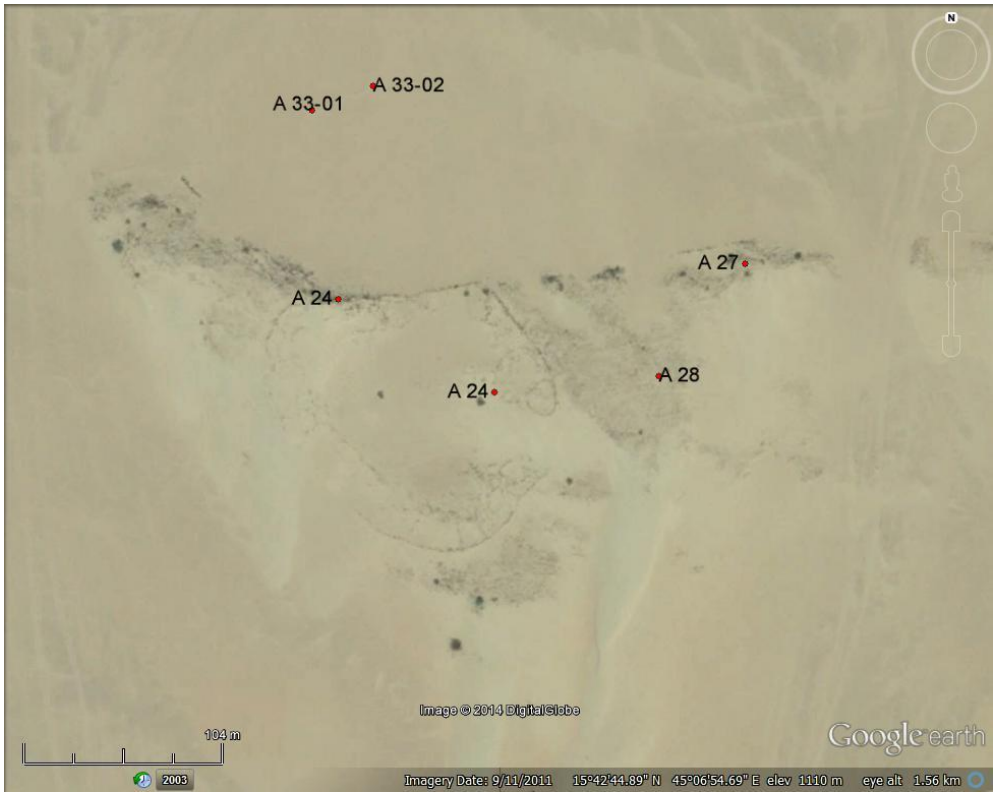

Figure 2 GIS plot of Locality A 27 relative to Locality A 24 and A 33.

The composition of the isolated petroglyph at Locality A 27 is a simple, schematic outline composition, approximately 30cm in height and 39cm in length. The entire composition is pecked into the surface of the boulder (Fig. 3).

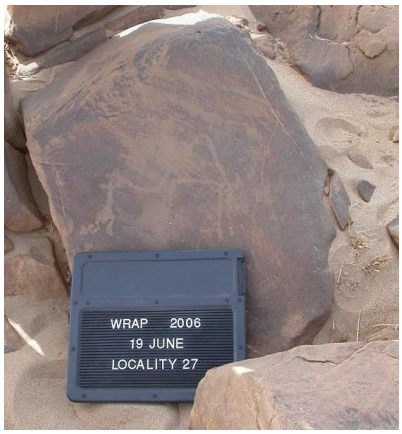

Figure 3 Locality A 27 petroglyph.

It consists of an anthropomorph leading a zoomorph, a camel. The anthropomoprh is depicted either frontally or in rear view (e.g. Jung 1994b: 241, fig. 12; Lancaster and Lancaster 2011: 181, fig. 22). Although this composition genre is common throughout Arabia and beyond, one aspect makes it peculiar: the pronounced bowed legs and feet splayed outward, presumably indicating motion, either away from Locality A 24 and toward Locality A 33, or the reverse.

The zoomorph in Arabian rock art is always rendered in profile view, otherwise the audience might not recognize easily the animal depicted or that it is led by the anthropomorph. If this composition is functionally related to either Locality A 24 or Locality A 33, then we surmise that the purpose of the composition commemorates the profession of the individual, a cameleer, who may have visited both sites and may even be buried in one or the other.

One interesting discovery may explain the bowed legs of our anthropomorph. In the al-Makdarah cemetery complex excavated by the Italian Mission, Coppa and Damadio (2005: 105) found paleopathological evidence of skeletal remains of bowed legs, which they attributed to the individual having spent considerable time riding on horseback, whereas the project's Director, Alessandro de Maigret, suggested the individual spent time riding on a camel's back (2005a: 18; 2005b: 149). Radiocarbon dates for the cemetery complex place it within the first millennium BC and into the early centuries AD (de Maigret 2005a: 20; 2005b: 148-149). Nevertheless, we are cautioned about attributing our petroglyph with burials. Ethnographic studies have shown that later visitors, often unrelated to the buried individual, come to stay for a short time next to the cairns and can leave their marks, especially if the location offers a vista, as our example does (Lancaster and Lancaster 1993).

6. LOCALITY A 31-17-2

Further south of the rocky outcrop along which Locality A 27 is found lies the major rock outcrop within the Wādī Raghwān, known by and named after the local tribal community, the Banī Shaddād, as Jabal Banī Shaddād. All around and even on top of this sandstone outcrop are found many archaeological sites: a long undulating channel formed of upright stones at the base of the outcrop, with at least one small sluice gate for runoff control, trapping sheetwash debris and diverting water runoff to anthropogenic silts that form a rectilinear pattern (Locality A 30-01). The area of interest is in the eastern end of this valley, a low saddle of bedrock, most of which is hidden from view as one passes along the course of the adjacent *wadi* in the west. The graffiti and petroglyphs of Locality A 31 extend from the western portion of the saddle to the east; the petroglyphs occur on the bedrock which slopes down from east to west (Glanzman and Rempel 2006: 25-27, 31).

The anthropogenic silts in the hidden valley are identical to the larger scale versions found elsewhere in the Wādī Raghwān, such as at Locality A 34. These remnants of occupation and use all seem to be pre-Islamic in date; only one sherd of a modern teacup was found around trees west of the cluster of petroglyphs (Fig. 4), and one handaxe was found nearby; no other artefacts are present on the site's surface. No Arabic graffiti occur around Locality A 31, although many pre-Islamic graffiti are found among the cluster, some having been covered over partially by later graffiti.

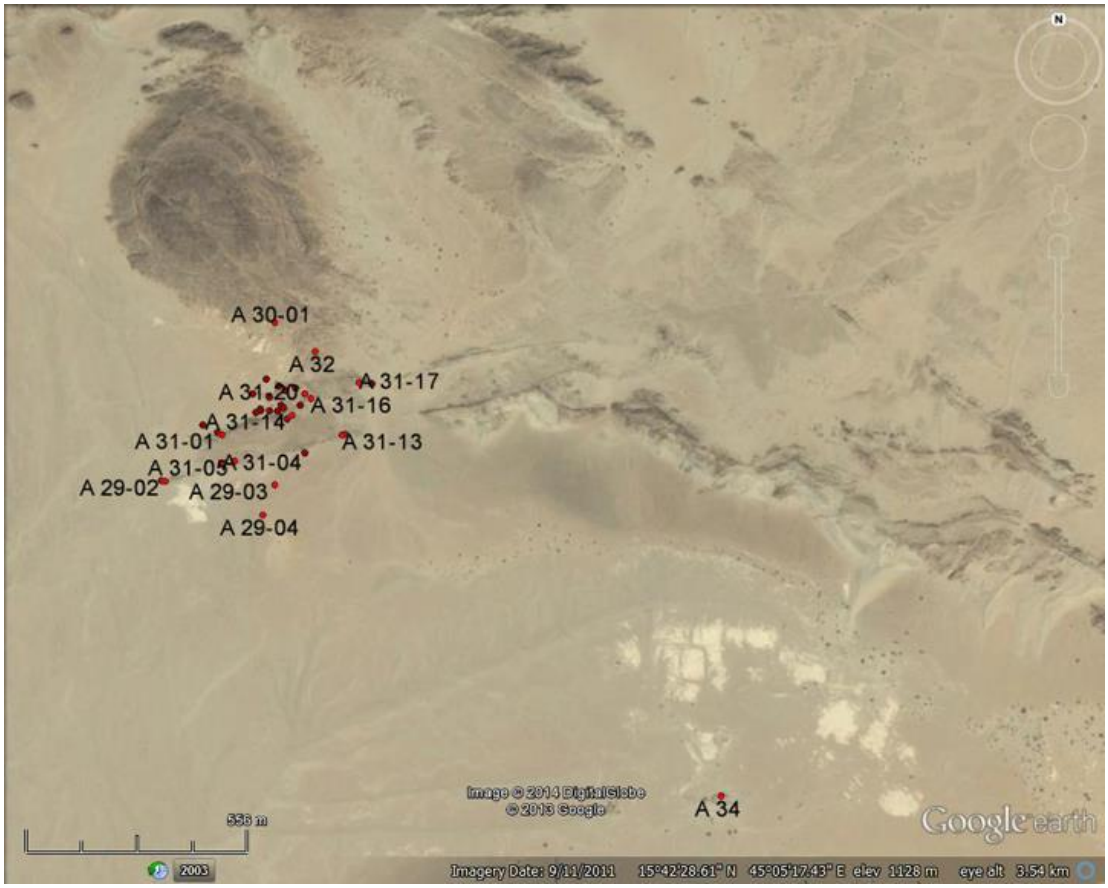

Figure 4 GIS plot of Localities A 31-17, A 32, and A 34 relative to other petroglyphs and sites within the hidden valley south of Jabal Bani Shaddad.

A long approximately 7 m wide bulldozed path runs from the west over Localities A 31 and A 32, causing some disturbance of the surface remains; our local guards explained to us it was part of Hunt Oil's a seismic exploration conducted by Hunt Oil as part of their 1988 survey in Block 19 (Petroleum Exploration & Production Authority 2006).

Figure 5a Petroglyph, Locality A 31-17-2. Figure 5b Petroglyph inverted.

Overlapping zoomorphs occur in clusters at Locality A 31, and the degree of re-patinization in the underlying examples exhibit the same colour as the untouched bedrock, indicating a very old exposure and use of this part of the saddle for a long time. The petroglyph, Locality A 31-17-2, is a later pecked composition yet not recent, judging from the degree of re-patinization. This composition, pecked onto a relatively flat surface, consists of two anthropomorphs, one upside-down relative to the other, and at least one zoomorph, a camel. In contrast to Locality A 27, however, the zoomorph is not rendered as an outlined figure; rather, it is here a fully pecked figure.

The two anthropomorphs are each rendered with their arms bent at the elbow and holding in the left hand what appears to be an oval-shaped shield, a motif found in combat scenes throughout pre-Islamic Arabia (e.g. Jung 1991a: 7, fig. 7; Olsen 2013: 148, 149). Extending between and touching both combatants is a long and straight linear motif, perhaps depicting a lance or spear. If the nearest zoomorph is indeed part of the composition, then from the viewer's perspective it appears that the lower anthropomorph has dispatched the upper one. The legs of the upper figure are splayed and the feet are pointed in the same direction, whereas the legs of the lower figure are vertical and the feet face left, suggesting stability. Both are shown in frontal view, while the zoomorph is always shown in profile. Indistinct, older pecked imagery occurs in clusters next to this composition.

If our interpretation is correct, a combat scene is portrayed with the lower figure winning and the upper figure dispatched; perhaps the conflict concerned ownership or control of a camel. Our composition may relate to the genre identified by Macdonald (1990) as a camel raid.

7. LOCALITY A 32-21

This locality is located along the southeastern flank of Jabal Bani Shaddad, between the sheetwash trap of Locality A 30 and the large cluster of petroglyphs in Locality A 31; taken together, these localities all occur in the eastern portion of the hidden valley (see Fig. 4). A large variety of petroglyphs are found here as well, many of which appear to be isolated motifs; several examples of the camel zoomorph are also found here. Numerous pre-Islamic graffiti are also present, while no Arabic graffiti are present. Many of the petroglyphs and graffiti exhibit various degrees of re-patinization compared to the surrounding bedrock, reinforcing the long history of use of this locality (Fig. 6). The most conspicuous figure here is a large anthropomorph, approximately 25cm wide and over 50 cm in height, exhibiting both incised and pecked elements. It occurs on an exfoliating surface of sandstone, so it is unclear if it is in isolation or part of a larger composition no longer extant; the lower legs and feet are not extant. This figure is a female (Glanzman and Rempel 2006: 27, 31).

Figure 6 Part of petroglyph panel at Locality A 32, showing varying degrees of re-patinization and overlapping of petroglyphs, pre-Islamic inscriptions, and wusum.

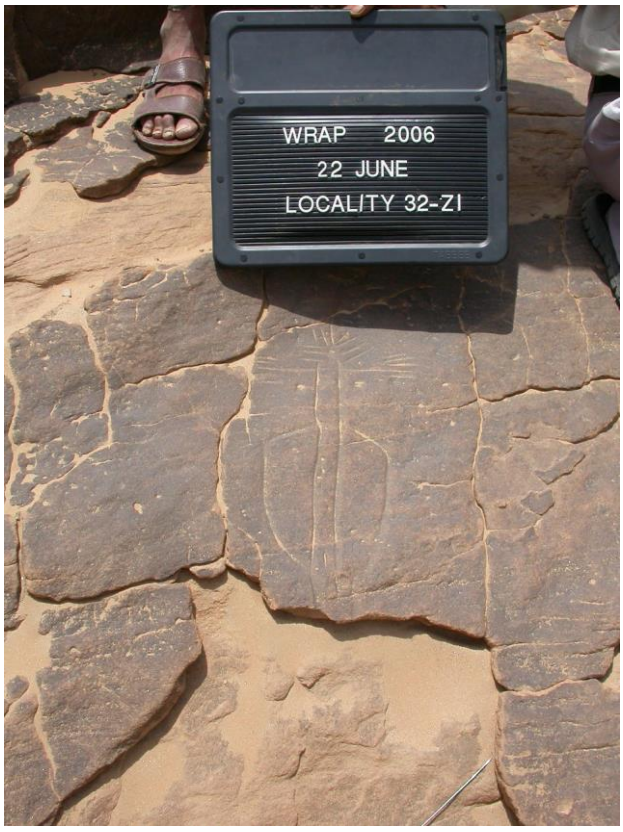

Figure 7 Petroglyph at Locality A 32-21.

The schematically rendered figure is depicted in full frontal position with arms extended out to the side. The miniscule head has hair rendered as extending out in three separate clusters, rendered in the same manner as the figure's fingers. There is a deep incision indicating a vulva, and the thighs of the figure are enlarged, while the feet are missing due to the exfoliation of the outcrop's surface. The position of this figure crosses a row of indentations where pebbles were once part of a bedding plane in the sandstone outcrop. An indentation is close to either side of the figure, suggesting that the artist positioned the figure deliberately to imply breasts. The display of the arms, fingers and hair are difficult to attribute to a specific action of the figure such as dancing, or a gesture such as adoration (Fig. 7).

The closest stylistic parallels to our figure are found in a group of figures described by Emmanuel Anati in general as "Oval-Headed People", specifically the "Long-haired People" style of his "Late Hunting and Pastoral" period within pre-Islamic times (Anati 1968; 1974: 84), although the examples he presented have their arms bent at the elbow. Other scholars regard this genre of an anthropomorph as depicting the ancient Arabian goddess known as Il-at, Ilah, Al-Lāt, Allat, or Alia (Lombry 2005: 207-208; Achrati 2006: 157-159, 162; Achrati 2008: 123; Khan 1998a; Khan 1998b: 56; Bednarik and Khan 2005: 75; Khan 2013: 458-459, 469, figs. 16, 31; Olsen 2013: 157, 160-161, 175, 178, 179), which is still an interpretation that the Bedouin of Saudi Arabia uphold (Bednarik and Khan 2009: 15; Khan 2008: 224). The renderings of those parallels are similar to our example; an example from Bi'r al-Ḥimaá in Saudi Arabia has both her breasts and her genitals indicated by drilled holes (Olsen 2013: 178). If we accept Khan's identification of this genre of anthropomorph, then we must extend his map of the restricted locations depicting this goddess, which he describes as the "Alia Triangle" (Khan 1998a: 435, fig, 7), southward to include the Wādī Raghwān.

8. LOCALITY A 34 WEST OUTCROP

On the last day of the field season we worked our way over to the largest of the hidden valleys, Locality A 34, which is composed of: several different settlement structures, including a lone *husn* (singular house or tower-like structure) to the east; a large, slightly elevated canal system leading into the valley in four diverging yet parallel channels that feed into anthropogenic silts; one of the channels leads directly into a large reservoir lined on the interior by *qudad*, a cementing compound mixed with crushed volcanic rock fragments (Al-Radi 1994), identical in composition to that used in various parts of the sanctuaries in Ma'rib and elsewhere during pre-Islamic and Islamic times; anthropogenic silt beds, which can be seen in satellite imagery; several other structures; and two prominent rock outcrops. These two outcrops served different functions. The one on the east has a *husn* with a series of large rectangular stone-built structures; the one on the west has no visible structures associated with it (Glanzman and Rempel 2006: 27-30, 32).

The easternmost of these has several large square stone pillars, so massive that they easily could have supported a second storey. The two structures on the

south are composed of field stones and some squared masonry blocks, possibly recycled from earlier structures. Between them is a large base of a press, identical in form and size to those still in use elsewhere in Yemen. Further east is a large rectangular structure lacking any internal supports or division walls in its exposed condition. It may have served as an animal pen. On the surface throughout are scattered numerous flakes and fragments of alabaster (travertine), some as partially worked slabs, which may indicate an origin in the travertine quarry, known as al-Manqaz, approximately 19 km southwest of Locality A 34 (Harrell 2008: 14, 16). The quarry site is accessed by a paved caravan road, suitable for camels, foot and cart traffic, connecting it with Sirwāh and the Wādī Raghwān drainage basin (de Maigret 2005a: 33, pl. 30). These fragments seem to represent the debris left behind by camel caravans trafficking travertine for various purposes, such as architectural decoration in pre-Islamic temples. There are some pre-Islamic graffiti and some Arabic graffiti on this outcrop but none are found on the exposed structures.

The western sandstone outcrop is covered by numerous examples of rock art as well as pre-Islamic graffiti and many examples of *wusum*, which are identity symbols, often used as collective tribal or clan brands on animals, such as camels; sometimes they are used to mark territorial boundaries (Khan 2013: 455, figs. 10, 11; Ziolkowski 1998: 63-64). It is this outcrop that exhibits two rare examples of rock art with important commonalities: a series of wide, pecked lines separate the compositions into sections each of which has several motifs pecked into the surface; the motifs in each section vary, and include palm trees as well as a tent-like structure; and *wusum*. Both examples constitute the largest renderings of petroglyphs encountered in the 2006 field season. Given the size and complexity of Locality A 34, which we encountered only at the end of the field season, we were unable to isolate, designate and describe in detail each of the features, inscriptions, and examples of rock art using the project's Locality designation system.

The first such composition we encountered spans at least 1.5 m in length and has three sections. The top left section contains: at least one triangular motif, possibly a structure or an outcrop or mountain, with a tree to its left; a palm tree emanating from the lower section line; two zoomorphs, the lower one is upside-down relative to the other; and several linear motifs. The section to its right lacks a separation line from the first, but has some indistinct linear motifs and requires the viewer to turn about 90 degrees to view two palm trees emanating from a long horizontally pecked line and bending in opposite directions. The third section is separated from the previous ones, but is oriented in the same direction as the last. Here as well there are two palm trees on its far left, while a somewhat swirling motif or combination of motifs is positioned above the trees. There are several linear motifs further away from this complex rendering, while two sides of the bedrock exposure are damaged so the entirety of the composition is not extant. This composition seems to suggest specific locations and perhaps agriculturally important palm groves (Fig. 8).

Figure 8 Petroglyph at Locality A 34 depicting a "cognitive map".

The second complex composition we encountered is on an exposure of the same rock outcrop, with numerous isolated motifs nearby. It is pecked into a relatively flat bedrock exposure with a sloping edge leading to two lower ledges; the long dividing line is approximately 1.6 m long and the composition is about 1.5 m wide. The long dividing line has a loop at its lower end of the top panel and continues down the sloping side, extending down to the lowest panel. Here, too, the composition is divided into sections, although the viewer is not required to turn to view each section. Instead, the viewer seems to be required to view the elongated sloping line from the lower end of the bedrock exposure. The top left portion of the composition has a triangular structure or outcrop with a zoomorph rendered in front of it, which emanates from or crosses over the dividing line. There appears to be a palm tree in the upper left portion, and some damaged and indistinct motifs above and to the left of the tree. The top right section of the composition has several linear motifs which are indistinct due to abrasion damage. The lower right section has several isolated motifs, some of which resemble script. The lower left section has what appears to be an anthropomorph wielding a possible lance while mounted on a zoomorph, a motif common throughout South Arabia. Another panel to the left of the sloping edge of the top panel contains several marks, all of which appear to be *wusum* (Fig. 9). Several parallels can be found in the corpus of *wusum* catalogued by Majeed Khan (2000).

Figure 9 Second petroglyph at Locality A 34 exhibiting another "cognitive map" and wusum.

The rendering of palm trees in our two examples acquires special importance, as such renderings are not commonly encountered. Parallels can be found at Uqulqh, Jabal Yātib, Qaryat al-'Asba` and in the "painted bull" panel at Bi'r al-Himá in Saudi Arabia (Olsen 2013: 153, 190, 192, 193), and an example from 'Ēn Halkān, also in Saudi Arabia (Schiettecatte 2013), all presumably of pre-Islamic date. Pictographs in a cave in Dhofar, Oman, similarly depict palm trees and possible irrigated fields (al-Shahri 2000: 147, Arabic section). In those instances, they are all oriented vertically, and lack the line below from which our trees emanate. Those lines in our examples likely refer to the irrigation of palm trees. The triangular motifs may represent tents or other architectural complexes as well as mountainous terrain. The clearest examples of structures may be seen in the rectilinear Islamic period renderings with incisions within them at al-Ḥuqqa in the Yemen (Jung 1991a: 21, fig. 16); our examples lack rectilinear motifs with internal divisions.

The use of dividing lines in these two compositions signals a special relationship between them and sets them apart from all of the other petroglyphs and compositions we discovered. They are here considered as cognitive maps. A cognitive map renders social and environmental issues that are related to an individual's two- or three-dimensional understanding of some part of an idea, structure, or landscape that is important to them and what they view as important to conveying that information to those who interact with them. Cognitive maps can aid in decision making as well as relay information for finding one's way with the use of landmarks. The relationship of distance and geography may be exaggerated or eliminated, depending on the information deemed vital to convey (Kitchin 1994). The issues the creator(s) of these compositions desire to relate may

have special significance, especially for the second example given the line extending down to the lower panel. It is here suggested that this composition is attempting to illustrate the location of palm trees with respect to where danger lurks: the anthropomorph with lance, mounted on a zoomorph, possibly indicating camel raiding. The panel with the cluster of *wusum* may express the tribal communities further afield. The long dividing line and its extension may relate to topography, specifically a mountain zone at the top and the lower zone where tribal communities may reside. Another possible cognitive map is described from Wadi Hababid in the Yemen (Jung 1991b: 263, fig. 8); others likely exist elsewhere within Arabia.

9. DISCUSSION AND CONCLUSIONS

These four examples of the many petroglyphs encountered in the surface reconnaissance survey of the WRAP stand out among the numerous examples of petroglyphs in South Arabia and beyond in terms of their renderings, and the kind of information they seem to represent. Given the effort involved in rendering the pecked compositions of Localities A 27, A 31-17, and A 34, and the placement of the incised and pecked figure at Locality A 32-21, the motifs and their arrangement cannot be dismissed as happenstance, or merely related to the varying abilities of their creators. They are rendered deliberately, and their placement has special significance.

The correlation of rock art with landscape archaeology has long been known (Bradley et al. 1994), and such correlations have been the focus in several projects (*e.g.*, Garcia and Rachad 1997). Those correlations been exceptionally useful for interpretation (*e.g.*, Jennings et al. 2013; Jennings et al. 2014). Of importance in such studies are the routes of animals and people within the landscape and the iconography depicted. The greatest number of petroglyphs in the Wādī Raghwān occur in association with irrigation structures, rock quarries, and both temporary and permanent use of structures. The locations of our four examples of rock art are of interest as well, whether isolated, as with Locality A 27, or in clusters associated as Localities A 31, A 32 and A 34. Locality A 27 seems to be connected to the occupation and burial complex of Locality A 24 and A 33. Indeed, its occurrence on the vertical face of an isolated boulder demonstrates it cannot be viewed without coming into visual proximity with both Localities A 24 and A 33. The movement depicted and the portrayal of the anthropomorph reflect skeletal phenomena in burials within the mountains directly to the south of the Wādī Raghwān, and our example is associated with camel riding. Our other peculiar examples all occur on relatively horizontal exposures of bedrock, and each of those occurs within a hidden valley east of the main course of the *wadi* system. The cave site near Localities A 31 and A 32 suggests temporary use, and the iconography may reflect a special symbolic association; certainly, Locality A 32-21 is symbolic of some sort of ritual. The two cognitive maps on the western bedrock outcrop at Locality A 34 also have symbolic significance, as they render specific locations and in at least one instance routes between its locations.

While it has not yet been possible to date these petroglyphs, the associated archaeological sites and their artefacts do strongly suggest they belong to the pre-Islamic era. The rendering of camels in the petroglyphs of Localities A 27, A 31-17, and A 34 and the special relationship shown in Locality A 27 of the anthropomorph to the camel do symbolize the importance of camels in the lifestyle of the figures rendered, but not the lifestyle itself (Eisenberg-Degen and Rosen 2013: 240, 242-243), as the renderings of the camel in our examples do not show every-day use. The association of the western rock outcrop with our two cognitive maps at Locality A 34 reflects either a sedentary lifestyle or the importance of palm tree cultivation in the region. The eastern outcrop, crowded as it is with architectural features that are best explained as storage and containment structures, and the presence of a large cistern to the north of the two outcrops, as well as the association of travertine fragments, strongly suggest the function of Locality A 34 as a *caravanserai*, a camel caravan stop-over, for exchanging goods and providing supplies, food and shelter for camel caravans traveling between the South Arabian kingdoms and destinations further afield. Camel caravans in the region were highly active in pre-Islamic times (Groom 1981); however, we lack written records that describe the population and history of Islam for the Ma'rib Governate.

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