Carving interactions: rock art in the nomadic landscape of the Black Desert, north-eastern Jordan
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Chapter 2 | The Jebel Qurma landscape

2.1. Introduction

The Jebel Qurma region is situated on the western edge of the Black Desert, in the northeast of Jordan and about 30 km east of the modern town of Azraq. It is part of the eastern desert of Jordan, known as the eastern badia. The research area is 336 km² and is situated on the border zone between the basalt uplands of the harra and the plains of the hamad (fig. 2.1). It is strategically located at the convergence of several natural passages through the basalt and near the crossroads of trade routes through the Ancient Near East. The region is named after the prominent hill of Jebel Qurma, which locally marks the beginning of the harra in the east. The area surveyed between 2012 and 2016 lies in the western part of the Jebel Qurma region and comprises 52 km² (fig. 2.2). This area is bordered by Wadi Rajil in the west, the mudflat Qa’a al-Teyarat in the north, and the Hazimah plains in the south.

The nature of the Jebel Qurma landscape affected and to some extent determined how people moved through the region and left their mark on it. The aim of this chapter is to provide an environmental and archaeological background on the landscape in which the ancient nomads made their carvings approximately 2000 years ago. First, I outline the topography and environment of this region. Second, I describe the archaeological structures that were built and reused during the Hellenistic and Roman periods, the approximate period in which the Safaitic carvings were made. The purpose of these sections is to contextualise the rock art within the Jebel Qurma landscape, which I do in the final section of this chapter. For a detailed description of the geology, topography, environment, and archaeology of the Black Desert and the Jebel Qurma region, I refer the reader to Huigens (2018).

2.2. Topography

The Black Desert is characterised by the fields of dark basalt boulders, from which the desert lends its name. The volcanic rocks cover the surface of the harra uplands, which is a rocky and undulating terrain with endless basalt plateaus and high hill peaks (fig. 2.3, fig. 1.3). The hamad plains that surround the basalt are more easily accessible, covered here and there with basalt and flint gravel (fig. 1.3). A number of key landscape features are situated within the Jebel Qurma region. On the west side of the surveyed area lies Wadi Rajil, which originates from Jebel Druze in Syria (fig. 2.4). The hill of Jebel Qurma is a prominent landmark in the west, where it is visible from afar (fig. 2.5). The mudflat, Qa’a al-Teyarat, forms a large, low-lying border at the north of the survey terrain (fig. 2.6). The harra is not one endless plateau but is interrupted by smaller valleys, wadi systems, and mudflats. These also create natural passageways through the basalt. Together with the presence of small, separate basalt plateaus and local hillocks, these various features make up for a diverse landscape within the Jebel Qurma region. In Chapter 6, I describe this landscape in more detail for five rock art areas within the region.

2.3. Environment

The Black Desert of northeast Jordan is today generally considered an arid and harsh environment. Summers are hot, with average temperatures of 35 to 38 °C and maxima of 46 °C (Akkermans et al. 2014, Huigens 2018). However, large catchments of rainwater can lead to sizeable bodies of water. Most of the rain falls in the winter, when the temperatures average 2 to 9 °C and cold air gusts prevail. However, the rainfall is highly
Figure 2.1: Satellite imagery of the research area Jebel Qurma (outlined in red), with relevant features labelled. Base map: Landsat 7, true colours.

Figure 2.2: The area surveyed between 2012 and 2016 (in grey) in the Jebel Qurma region. Base map: Landsat 7, true colours.
variable with the possibility of winters with very little precipitation and long drought spells (Al-Homoud et al. 1995, Huigens 2018). The oasis town Azraq is one of the few permanent water sources in the area. Most of the rainfall is carried off to wadis or mudflats (*qa’a* in Arabic, singular), which can fill with water or hold sub-surface moisture (Huigens 2018, 21). The desert vegetation is sparse, with mostly shrubs and grasses and few trees; it varies seasonally depending on rainfall (ibid. 23, 43). Today the only inhabitants of the region are small Bedouin groups that occasionally visit the desert their camel, sheep, and goat herds when pasture is good and water is plenty (Rowe 1999) (fig. 2.7, fig. 2.4).

Palaeoclimatological evidence is sparse for the eastern *badia* so it is difficult to reconstruct the past environment. However, there are some indicators that the climate and ecology were slightly more favourable than it is today. At one of the sites in Jebel Qurma (QUR-595), wood from a Late Hellenistic context was found belonging to a tree species, ash, that is associated with more humid habitats than the current Black Desert climate (Huigens 2018, 116). Additionally, the nearby town Azraq was a thriving oasis only half a century ago. Before the 1980s, when water pumping increased significantly, the oasis was a major attraction for migratory birds (RSCN 2015). Just over a half century before that, a large diversity of carnivorous and herbivorous mammals inhabited the Black Desert. Trapping, poisoning, motorised hunting, and habitat modification has rendered almost all of them endangered or extinct in the area today (Mountfort et al. 1965, Hatough-Bouran and Disi 1991). The presence of these animals in antiquity is attested by the depiction of them in the rock art and by zooarchaeological evidence (see Chapter 3). The desert ecology was thus more diverse and richer than it is today. The vegetation and climate overall may have been more favourable as well, but this cannot be ascertained with the current evidence. Either way, it is likely that the inhabitants of the region in antiquity also dealt with the typical problems associated with a desert environment, such as low rainfall and droughts, as complaints and appeals to deities about these matters are mentioned in Safaitic inscriptions (Al-Jallad 2015, OCIANA 2017, Della Puppa forthcoming).
2.4. Archaeological remains from the Hellenistic and Roman periods

The Safaitic carvings have conventionally been dated to between the 1st century BC and the 4th century AD, thus the Late Hellenistic period and Roman period. This is based on references in Safaitic inscriptions to political events that date to the Nabataean and Roman periods and on the fact that there are no known references to Christianity (Al-Jallad 2015, 17). Most scholars agree that this chronology is unsatisfactory and that the practice of making these carvings may have started earlier and ended later (ibid.). However, it allows us to approximately situate the carvings in time and consider their production within the context of the Hellenistic and Roman periods.

The history of inhabitation of the Jebel Qurma region begins much earlier and continues, albeit

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2 For example, the inscription ‘By Mḥwr son of ʿṭfn son of ʿdnt and he returned to a place of water with his goats the year the Persians waged war upon the people of Rome at Bṣry ʿṭ ara (C 4448) (see Appendix B for sigla references).
punctuated, until today (Akkermans et al. 2014, Huigens 2018). While there appears to have been a lot of activity in the region in prehistory, there is subsequently a gap in substantial evidence for inhabitation in the early to mid-1st millennium BC. A few broad absolute dates and one artefact indicate that there might have been activity in the region during the Iron Age (1200–550 BC), but more research is needed (Huigens 2018, 201). There then appears to have been a peak in activity, with absolute and relative dates from various contexts providing concrete evidence for inhabitation from the 4th and 3rd centuries BC onwards (ibid.).

2.4.1 Funerary structures

A number of stone-built funerary structures have been dated to the Hellenistic and subsequent Roman period based on radiocarbon dates, Optically Stimulated Luminescence (OSL) dates, and artefacts. One type is the so-called tower tomb, a large burial cairn with a tower-like façade (fig. 2.8). Another type of cairn dated to this period is the ring cairn, which may be a slightly earlier type (Huigens 2018, 209). At a number

Figure 2.5: a) The Jebel Qurma hill seen from the south, from the Hazimah plains. b) Jebel Qurma seen from the northeast.
Figure 2.6: A view of the large mudflat Qa’a al-Teyarat.

Figure 2.7: A herd of camels pastures on the slopes of the Jebel Qurma hill.

Figure 2.8: The Tower Tomb cairn at the site QUR-186. Scale bar = 50 cm.
Figure 2.9: Aerial photograph of a Pendant and cairn in the eastern badia (Photo by Don Boyer, courtesy of APAAME 2011).

Figure 2.10: Low stone-walled enclosures at the site QUR-20.

Figure 2.11: Aerial photograph of a desert kite in the eastern badia. The long walls or guiding lines lead to a large enclosed space which has smaller cells adjacent to it (Photo by David Kennedy, courtesy of APAAME 2010).
of cairns, pendants were added to the structure, a string of small piles of stones (fig. 2.9). Their function is unclear, but they appear to be related to the funerary practice. Rock art and inscriptions often appear to cluster around tower tombs and other types of burial cairns, but excavations in the Jebel Qurma region showed that, in the majority of cases, the carvings must have already been present when the cairns were built (Huigens 2018) (see Chapter 6.3).

There are two Safaitic inscriptions in the Jebel Qurma region that refer to ‘the cairn’ and a possible third. One was found near a burial cairn and may thus refer to this structure, although the chronology of this cairn and its exact relationship to the inscription is still ambiguous (see Chapter 6.3.3). The other was found at a site with various structures, including a wheel, clearings, and so-called ‘hut’ structures. The translation of the third inscription is indeterminate; it may refer to ‘the cairn’. The only structure nearby

3 QUR-143.2.1.
4 QUR-936.1.1.
was a small marker. The existence of inscriptions in the Jebel Qurma region and other areas in the *barra* referring to cairns indicate that these peoples built cairns for their dead. The most famous and concrete example is the so-called Cairn of Hani, a burial cairn found in the *barra* north of the Jebel Qurma region with numerous inscriptions around it referring to the name ‘Hani’ and stating that the cairn was built for him (Harding 1953). These examples indicate that building burial cairns was part of the funerary customs of the nomads who made the Safaitic carvings.

2.4.2 Residential structures

In the Hellenistic and Roman periods, a number of different ‘residential’ types of structures were built and reused. Clearings, areas that have been cleared of the surface stone cover to create an open space, and several campsites were dated to this period based on ceramics (Huigens 2018, 202, 209). The surveys also revealed a large number of enclosures, ‘walled structures enclosing a space that may or may not have been clear of basalt boulders’, which were probably used as residential areas or animal pens (ibid., 64). Many of the enclosures may have been built in prehistory already, but ceramics from the Hellenistic and Roman periods attest to their reuse in these periods (ibid.). Furthermore, 12 Safaitic inscriptions refer to ‘enclosure’ in the text, of which the most common configuration is ‘By [name] is enclosure’ (Della Puppa forthcoming). Several of these were found at sites with enclosures (fig. 2.10). It is unclear whether these texts should be interpreted as the author built the enclosure, used the enclosure, or something else (ibid.), but the attestation of this word indicates that the enclosures were used by the Safaitic carvers. Other types of stone constructions, such as stone markers, were found in the Jebel Qurma region, but these were most likely constructed in later periods (Huigens 2018).

2.4.3 Reuse of older structures

The authors of the carvings may have reused or had an affinity with other older structures. Some small cairns in the Jebel Qurma region have been dated to the late Early Bronze Age (Akkermans and Brüning 2017, Huigens 2018). However, they were rarely reused in the Hellenistic and Roman periods; instead, the inhabitants of this period appear to have mostly constructed new funerary monuments (Huigens 2018,
Several of these have used stones carved with Safaitic inscriptions and images in their construction (see Chapter 6.3).

There are two types of stone-built architectural features that do appear to have been reused repeatedly through time. The first is the ‘desert kite’, a huge structure consisting of long walls (‘guiding lines’) that end in a large enclosed space, which has a number of small enclosures (‘cells’) adjacent to it (fig. 2.11) (Barge et al. 2015). There are 11 documented kites in the surveyed area of the Jebel Qurma region (Huigens 2018). Desert kites are commonly interpreted as hunting installations, whereby wild animals are herded through the funnel created by the long walls and trapped and killed in the enclosure (Chahoud et al. 2015). However, there is as of yet little concrete evidence that this is how they were used (ibid.).

The dating of the kites is a much-debated topic, but there is evidence that at least some of these structures are prehistoric in date (Betts and Burke 2015). They appear to have remained in use or of importance in later times though, as evidenced by depictions of kites in rock art from the Black Desert. The most famous example was found at the Cairn of Hani and clearly depicts a desert kite in use, associated with a Safaitic inscription (fig. 2.12). Although it has been disputed whether it portrays a hunting or herding scene (Macdonald 2005, Maraqten 2015), the depiction clearly shows the use of a desert kite. There are several other rock carvings of desert kites from the eastern badia (Helms and Betts 1986). Two carvings of kites were found in the Jebel Qurma region (see Chapter 4.5.2). The depictions of desert kites in rock art suggest they were reused by or held importance for later societies.

The second type of structure that was already present in the landscape and possibly reused in antiquity is the ‘wheel’. These are circular enclosures grouped together in a wheel-like shape (fig. 2.13). Their function is unclear and the date of origin is unknown. However, recent investigations in the Jebel Qurma region and elsewhere in the Black Desert suggest they were constructed in prehistory (Akkermans et al. 2014, Huigens 2018, 74). Of the numerous wheels in the Jebel Qurma region, several yielded ceramics from the Classical to Late Antique periods, suggesting they were reused for domestic purposes then (Huigens 2018, 75). There are also four rock carvings from the study area that may represent wheels (see Chapter 4.5.1).

Huigens (2018, 79) has also identified the presence of paths running through the basalt (fig. 2.14 & fig. 6.48). They do not appear to have been intentionally ‘built’, but have instead been formed through the repeated movement of people and animals through the landscape (ibid., 80). Although a large number of smaller paths are present in the region, it is not possible to date them directly and determine which of them were already existed in the Hellenistic and Roman periods. However, a number of major routes that extend through the region were probably already present and in use, such as...
the valley of Wadi Raji and the area around Qa’a al-Teyarat.

2.4.4 End of production?

According to the conventional dates, Safaitic carvings ceased to be produced around the 4th century AD. This coincides with a cultural change in the Jebel Qurma region, but not the end of inhabitation. For example, the construction of burial cairns appears to stop after the 3rd or 4th century AD and instead inhumation graves appear (Huigens 2018, 210). The continuation of inhabitation and use of the area is evidenced by the dated inhumation graves, relatively large amounts of ceramics dating to the Byzantine and Early Islamic periods, and radiocarbon dates from enclosures and clearings (ibid., 202). The region thus continues to be inhabited throughout the 1st millennium AD by nomadic groups, based on the archaeological evidence (ibid.). It is unclear whether the Safaitic carvings continued to be produced or not.

2.5. Contextualising the rock art

The Safaitic rock art and inscriptions of the Jebel Qurma region can be found engraved in the dark basalt rocks of the harra uplands. These uplands are diverse, with long basalt plateaus and prominent hilltops, intersected and bordered by wadi systems and mudflats. Surrounding this area are the low-lying plains of the hamad. The topography and environment of this region appear to have remained relatively stable throughout antiquity, although the availability of water and vegetation may have fluctuated (Huigens 2018, 209). There are indications that the environment might have been slightly more humid and thus perhaps more favourable in the Hellenistic period, but more research is needed to verify this. The harsh landscape would have hosted more life 2000 years ago when the desert fauna, which has all but been eradicated in the last century, was still diverse.

When the production of the engravings started and ended precisely is unclear, but it is clear from the archaeology that the creation of the rock art and inscriptions was part of a long history of inhabitation in the Jebel Qurma region. Different types of structures, such as kites, wheels, cairns, and enclosures, had been constructed in prehistory and were part of the landscape that the later nomads inhabited. These structures were also reused and perhaps held significance for these peoples. In the Hellenistic and Roman periods, new types of structures were built and used, such as tower tombs, ring cairns, clearings, and campsites. Although it remains difficult to link the archaeological remains directly to the people who made the Safaitic carvings, it is now clear that there was increased nomadic activity in the Jebel Qurma region from the beginning of the Hellenistic period on and throughout the periods to which the carvings have conventionally been attributed.