

An Archaeological Baseline Study of Wadi Madhab, Fujairah

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Figure 1. General map of archaeological sites in Wadi Madhab and adjacent tributary wadis.

Introduction

During the autumn of 2007, the authors undertook an archaeological baseline study of the Wadi Madhab, Fujairah. This was commissioned by Hyder Consulting Middle East, on behalf of the ICG Group, Dubai, as part of planning for a residential and leisure property development covering much of the wadi and of several of its northern and western tributaries. Although previous archaeological work had been undertaken in the area, including both surveys and excavations, the new survey identified a large number of sites that had, apparently, not been previously recorded, including sites from the Iron Age, the pre-Islamic period, probable early or mid-Islamic sites and Late Islamic sites. While many of the newly-recorded sites were single pre-Islamic burial cairns, others included groups of cairns and large buildings.

A short summary of all sites now known to have been recorded in the Wadi Madhab is presented here, to complement and to supplement earlier publications.

Over the course of the last decade, numerous archaeological baseline studies have been undertaken throughout the United Arab Emirates by the authors and others, under the terms of commercial consultancy

contracts. For the most part, the results of such surveys have not been published or otherwise made available to the archaeological community, or more widely, because of considerations relating to contract confidentiality. The only notable exception is much of the work undertaken in the Emirate of Abu Dhabi from 1995-2006 by the Abu Dhabi Islands Archaeological Survey, ADIAS, for members of the Abu Dhabi National Oil Company, ADNOC, group of companies. ADIAS ceased its operations in late 2006, following the establishment of the Abu Dhabi Authority for Culture and Heritage, ADACH.

This paper is presented, therefore, to provide an indication of the results being obtained in the UAE from such consultancy surveys.

The management of ICG are thanked for their permission to publish the summary results of the Wadi Madhab survey, and for their willingness to engage in detailed discussions with the authors at the planning stage for the development project to ensure that, as far as possible, significant archaeological sites were studied and/or protected.

General Description of the Wadi Madhab area

Wadi Madhab is a wide and gently sloping wadi lying immediately west of Fujairah City, on the eastern slopes and foothills of the Hajar Mountains, and is entered by a road running along the side of the palace of the Ruler, HH Sheikh Hamad bin Mohammed Al Sharqi. The area known locally as Wadi Madhab is, in fact, a low-lying plain, adjoined by several steep and narrower tributary wadis on its northern and western sides that drain the east-facing mountain slopes. Part of the main plain has been developed for small farms and two large enclosed gardens, within one of which lies the site of an old spring, Ain al-Madhab, now no longer flowing as a result of increased water extraction from the area in recent decades. A number of shallow gullies, caused by rainwater run-off, cross the plain, particularly close to its northern and southern edges, in a west-to-east direction. Along the edges of such gullies, and at several points where the removal of soil has been undertaken, there are exposed geological sections that indicate that much of the plain is comprised of a thick layer of silt and small gravels washed down by rainfall. It is presumed that much earlier evidence of occupation in the main part of Wadi Madhab is now buried under these silt and gravel deposits.

The tributary wadis and the inner parts of the main plain of Wadi Madhab are primarily typical sloping wadi terraces, cut by rainwater gullies, and covered with small rocks and boulders, which have provided the building material for many of the sites identified during the survey.

Notes on former inhabitants of Wadi Madhab

(by *Abdullah bin Suhail al-Sharqi*)

Until relatively recent times, the inhabitants of Wadi Madhab were from the small Bin Hilal tribe. The main settlement was in the north eastern part of the main wadi plain and in the adjacent smaller tributary wadis. The information that follows is drawn largely from two members of the tribe, Ali bin Awash and his father, Awash, who also kindly guided the author around the wadi to explain the nature and distribution of the tribe's settlement and associated activity. Further information has also been obtained from Sultan bin Hilal, now in his late 70s.

The Bin Hilal inhabitants were traditionally engaged in a small amount of cultivation and also kept livestock, primarily goats, which grazed on the central plain of Wadi Madhab, as well as in the tributary wadis and on surrounding hillsides. There were also a number of small date gardens, which were concealed behind the rocky spur containing the Islamic period hillfort and could not be seen from the coastal plain. This fort itself (Site WM-37) was known as Husn Awlad Braik, after a small tribe, the Libraikat, who formerly lived for a short time in this area of Wadi Madhab.

A number of other tribal groups also settled seasonally in Wadi Madhab during the summer, these including the al-Ghawayd, Shihuh, al-Zooaher and Libdah.

The informants stated that there were more than eight

small farms, and more than three wells (only one of which is recorded in the Site Gazetteer, Site WM25, *below*), and that there was formerly an extensive *falaj* system in this area of the plain. As noted in the Site Gazetteer, the remains of one of the *falaj* channels has been identified during the archaeological survey (Site WM-29).

Deceased persons were buried in a cemetery adjacent to the existing Ain al-Madhab park, this cemetery now being fenced (Site WM-26). The last burial there, around 13 years ago, was of the mother of Sultan bin Hilal, one of those who provided information for this note.

The Bin Hilal inhabitants of Wadi Madhab began to leave their houses in the early 1970s and to move to the central plain of Fujairah, where more modern housing was being built for them by Government. At this time, only five or six houses still remained in use.

Previous work

The first known archaeological survey of the Wadi Madhab area was undertaken in the late 1960s by Beatrice de Cardi and Brian Doe (De Cardi and Doe 1971). No further formal archaeological work is known to have been undertaken prior to several seasons of study undertaken between 1987 – 1993 by a team from the Swiss-Liechtenstein Foundation for Archaeological Research Abroad, led by Pierre Corboud, this involving latterly an excavation of an Iron Age hill-top fortress, Husn Madhab, which lies on an outlier of the Hajar Mountains near the north-east entrance to the wadi (Corboud *et al.*, 1990, 1991, 1994).

Further excavation was undertaken by a team from the University of Sydney, Australia, led by Daniel Potts, and including one of the authors (MC Ziolkowski), in the mid-1990s of a group of early Islamic copper ore roasting ovens in a tributary wadi at the south-west corner of the Wadi Madhab, while a team from France's Centre National pour les Recherches Scientifiques, CNRS, led by Anne Benoist, undertook a limited amount of survey work in 2000 (*pers. comm.* & Benoist 2002).

MC Ziolkowski also undertook independent survey and recording work in 1997 and 1998 during preparation of her doctoral thesis at the University of Sydney (Ziolkowski 2002).

A list of reports and publications arising from this earlier work is included in the Bibliography

Sites recorded during previous surveys are included in the Site Gazetteer, *below*, with original Site Numbers, where known, also being given.

Survey Scope

The survey of Wadi Madhab was conducted between September and mid-October 2007, with a brief follow-up survey in December 2007 to delineate several areas designated under the site development plan for protection, because of the presence within these areas of clusters of archaeological features. The survey covered the central wadi plain of Madhab and the tributary wadis (*'awdia*) to the north and west, with the objective being to create a preliminary record of the archaeological features present in the area, and to provide recommendations for

further survey, excavation and preservation. Ceramics (potsherds), where identified, were not removed from sites but were recorded *in situ*. Archaeological sites already known to exist in the area were also inspected.

Those areas which had already been extensively disturbed, such as inside the two fenced plantations, were not examined in detail. Each archaeological site noted in the October 2007 survey was given a site number (Site WM1 – WM32) and summary descriptions were recorded (including photographs and GPS coordinates). Site numbers in the WM format (WM-33 to WM-37) were also allocated to sites recorded during previous survey work, with original site numbers also noted where available, while two further sites identified during a December 2007 follow-up survey were also given site numbers (WM-38 and WM-39).

Where a number of archaeological features were recorded close to each other in a clearly-definable area, the features were grouped with a single site code, (e.g. Site WM-6).

Overview of the Archaeology of Wadi Madhab and its tributaries

As indicated by the results of earlier survey work, the Wadi Madhab area, including its tributaries, has a considerable number of archaeological sites. The number has been very extensively increased as a result of the recent field survey. In all, well over seventy individual archaeological sites and features have thus far been identified within the Wadi Madhab area.

There is considerable variety in the types of site present, including pre-Islamic tombs, which cannot be securely dated without excavation, and may range from the Wadi Suq period to the Late pre-Islamic period, and a Moslem cemetery, this latter having been used within the last fifteen years (*see above*), the remains of large stone buildings, sites related to industrial activity (the copper roasting ovens at Site WM-1), fortifications (two hill-forts), rocks with petroglyphs and ruined buildings and associated features of the Late Islamic period. There are also large raised mounds adjacent to the Islamic cemetery which may conceal earlier cemeteries or settlement evidence, although this cannot be confirmed without excavation.

Chronological periods represented include the Iron Age (1250 to 300 BC), the Late pre-Islamic period (300 BC to mid-7th Century AD), the early/mid Islamic period (mid-7th – 14th Century AD) and the later Islamic period, from the 16th-20th Century AD. It is considered probable that more sites indicative of occupation during the mid-Islamic period (10th-16th Century AD) are also present, perhaps buried as a result of the deposition of silt washed down by rainfall or perhaps concealed under occupation from later periods. Pottery of 14th-20th Century date has been identified that may fall into this period.

Although a number of sites have yet to be securely dated, it is evident, that the sites in Wadi Madhab and its tributaries, and on adjacent hillsides, provide evidence of broadly continuous occupation over a period of over 3,000 years. Evidence from the Bronze Age may

yet remain to be identified, since tombs from this period have been recorded elsewhere along the East Coast of the United Arab Emirates, from Khor Kalba, in the south, to Dibba in the north. Large collective tombs of these Bronze Age periods have been identified on low-lying coastal plains or adjacent hillsides at, for example, Bidiya and Sharm, to the north, and Kalba, to the south, as well as within the confines of Fujairah City (Mereishid), where a tomb of this period was identified below the current ground surface during construction work, and similar structures may be concealed beneath the silt deposits on the central wadi plain of Wadi Madhab.

It has previously been suggested by one of the authors (MCZ) that the original main settlement on the Fujairah coastal plain may have been in Wadi Madhab, this perhaps being concealed from the coast by the presence on the main coastal plain of date palm groves. A similar pattern is present at several villages further north, e.g. at Qurrayah, with further extensive settlement in the Wadis Safad and Thayb that flow to the coast at Qurrayah.

It has been further suggested that the main occupation of the Fujairah plain commenced only following the building of the large fort (Fujairah Castle), in the Late Islamic period, and that there was then a gradual move of the centre of population coastwards from the Wadi Madhab to the area of the castle (Ziolkowski and al-Sharqi, *in press*).

Whether or not this interpretation of the evolution of the pattern of settlement is correct, it is evident that the archaeological sites in the Wadi Madhab area are crucial to any understanding of the historic and pre-historic pattern of settlement in the vicinity of the present-day Fujairah City. The presence of the two forts in Wadi Madhab, the Iron Age fort of Husn Madhab, which may also have been re-used in the Late Islamic period (Ziolkowski 2002), and the nearby Late Islamic hill-fort, Husn Awlad Braik, further indicate that the occupation was of regional, rather than purely local, importance. Thus the nearest other Iron Age forts known are at Bithna, inland, in the Wadi Ham, and at Awhala, to the south, and the Husn Madhab Iron Age fort, close to the coast, was presumably linked in some way with these, perhaps as part of a broader political entity.

The Wadi Madhab area contains archaeological sites which are of fundamental importance to any understanding of the evolution of the City of Fujairah and of the political entity of which it is capital.

Survey Gazetteer

Notes:

1. Datum is the WGS84 datum, in decimal degrees format
2. Illustrations are not provided for each individual newly-recorded site where many similar examples exist – e.g. single burial cairns of pre-Islamic date – for which only representative examples are presented, or for previously-identified sites.

Site WM-1

Previously published as Site 73 (Ziolkowski 2002:I: 167) Swiss Site 6 (Corboud et al 1988: 22; 1991: 6).

Copper roasting ovens, slag scatter and ore extraction zone.

GPS:

N 25.151333

E 56.294777

This site consists of five rock-built U-shaped copper roasting ovens built into the side of the mountain, with lumps of slag in the vicinity and an ore extraction zone on the opposite side of the wadi. There are fragments of stone walls present on the mountain slope opposite the ovens (Ziolkowski 2002:I: 167).

These ovens have direct parallels with early Islamic roasting ovens excavated by the German Mining Museum and others in the Sultanate of Oman, for example at the sites of Mullaq and Lasail (Weeks 2000: 207-8). Similar roasting ovens are also located at Wadi Safarfir, southern Ra's al-Khaimah, UAE (Weeks 2000: 208).

A charcoal sample obtained from one of the oven deposits at Wadi Madhab provided an AMS radiocarbon date range of 890-1015 cal. AD (2 sigma; Beta 91470: 1090 \pm 30 BP; CALIB 3.0.3.c-Stuvier and Reimer 1993) (Weeks 2000: 208).

One glazed sherd was recovered from the site, and has been dated to the 7th to 10th centuries AD (Ziolkowski 2002:I: 253).

Site WM-2

Pre-Islamic cairn

GPS:

N 25.14902

E 56.29919

A small circular-shaped cairn, constructed with mountain rocks and using dry stone masonry. Located on the wadi plain south-east of the copper roasting ovens at site WM-1. No ceramic sherds or other associated finds.

Note concerning the small circular-shaped cairns

The feature at Site WM-2 and other pre-Islamic graves / cairns at other sites in the Wadi Madhab are comparable to three circular-shaped graves excavated by MCZ in Wadi Saqamqam, where over 50 such graves are present. None of those excavated in Wadi Saqamqam retained any material to permit definitive dating, but they have been compared to other such examples excavated at Traif, in Kalba, to the south of Wadi Madhab, by Dr. Sabah Jasim of the Sharjah Directorate of Archaeology. (Jasim, *n.d.*). They are all considered to be pre-Islamic in date (Ziolkowski 2003: 12). For a full discussion outlining the location of comparable graves, see Ziolkowski 2003: 9-10.

Comparable burial cairns have also been noted at Fara



Figure 1. One of the copper roasting ovens at Site WM-1.

and Gizemri in Fujairah, south west of Wadi Madhab (Ziolkowski & al-Sharqi 2005: 206). Carl Phillips has excavated a number of similar burial cairns and smaller circular-shaped graves in the Kalba area and has proposed a date range of post Iron Age/Late pre-Islamic period (C Phillips *pers comm*: 2004), i.e. the period from around 300 BC to the mid-7th Century AD.



Figure 2. Cairn at Site WM-2

Site WM-3
Pre-Islamic cairn
GPS:
N 25.14965
E 56.29790

A small circular-shaped cairn, similar to WM-2. Located on the wadi plain south-east of the copper roasting ovens at Site WM-1. No ceramic sherds or other associated finds.

Site WM-4
Pre-Islamic grave
GPS:
N 25.14973
E 56.30175

A small circular-shaped cairn, similar to WM-2. Located on the wadi plain, close to the base of the mountain, south-east of the copper roasting ovens at site WM-1. No ceramic sherds or other associated finds.

Site WM-5
Pre-Islamic cairn
GPS:
N 25.14991
E 56.30118

A small circular-shaped cairn, similar to WM-2. Located on the wadi plain, close to the base of the mountain, south-east of the copper roasting ovens at site WM-1. No ceramic sherds or other associated finds.

Site WM- 6
Graves (pre-Islamic), enclosures and wall fragments
GPS

(Perimeter coordinates reflecting a large area with numerous features within)

(1)
N 25.15532
E 56.30037
(2)
N 25.15563
E 56.29962
(3)
N 25.15612
E 56.30072
(4)
N 25.15476
E 56.30169

These sites are all located within a tributary wadi. One body sherd of possible Iron Age date was recorded during the survey as well as a small body sherd of 'red coarse ware', dating from the Islamic period. Three wall fragments were also noted within the area.



Figure 3. Potsherd of possible Iron Age date associated with one of the circular cairns at Site WM-6.



Figure 4. 'Figure-of-eight' cairn at Site WM-6



Figure 5. Rectangular structure at Site WM-6

Archaeological Features present:

A: Circular cairns

A total of 12 small circular-shaped cairns, comparable to the single examples at Sites WM-2 to WM-5, above.

B. Figure-of-eight type burials

Four 'figure-of-eight' burials, each consisting of two circular-shaped graves built side by side and built of mountain rocks using dry stone masonry. Pending further investigation, these are presumed to date to the same period as the single graves/cairns. No associated finds.

C. Triple cairn

A group of three, possibly more, conjoined circular cairns, of the same construction as the single and 'figure-of-eight' graves, above, and of the same presumed date. No associated finds..

D. Rectangular stone enclosure

A large rectangular-shaped enclosure situated close to

the base of the mountains, built of a double row of large mountain rocks and wadi boulders. The building is approximately 7.5 by 7 metres, with three walls surviving, those on the western and southern sides being the best preserved. There is no surviving wall on the eastern side, adjacent to the existing track. This may have been washed out as a result of downslope erosion.

The walls are wide and contain a rubble fill. 'Figure-of-eight' graves are attached to the exterior southern and eastern sides of the structure. No associated finds.

E. Oval structure with dividing wall

An oval-shaped stone structure with a dividing wall, built with mountain rocks and wadi boulders in dry stone masonry. Its date and function cannot yet be determined. No associated finds.

F. Structure of irregular shape.

An irregularly-shaped stone structure, built of mountain rocks using dry stone masonry, of undetermined date and function. No associated finds.



Figure 6. Oval structure at Site WM-6



Figure 7. Irregular-shaped structure at Site WM-6



Figure 8. Oval-shaped grave at Site WM-7

Site WM-7
Pre-Islamic cairns and structure.

GPS:
 N 25.15750
 E 56.29949

N 25.15714
 E 56.29953

The features encompassed within this Site Code are all located between the above two coordinates and lie in the centre of a tributary wadi, on a slightly raised area. All features are constructed with large mountain rocks and wadi boulders using dry stone masonry. Features present include: a circular-shaped structure; two oval-shaped graves; two circular-shaped deflated burial cairns; and two small circular-shaped graves.



Figure 9. Two circular-shaped cairns at Site WM-7



Figure 10. Well-preserved circular grave at Site WM-8

Site WM-8

Pre-Islamic cairns and structures.

GPS:

N 25.15875

E 56.29948

The site is on the central plain of the wadi, with archaeological features present being two small circular-shaped graves, one being particularly well-preserved, and one conjoined grave, consisting of three circular-shaped graves, with two U-shaped rock-built structures close by. No ceramics or other associated material.



Figure 11. Structures on the wadi terrace at Site WM-9

Site WM-9

Settlement (?) and pre-Islamic grave

GPS:

N 25.15616

E 56.30220

This site is located on the eastern side of the wadi plain in a tributary wadi, in the vicinity of this GPS point.

The structures are both on the edge of the wadi terrace and at the base of the mountains and consists of a series of roughly square-shaped structures built with rocks and set in dry stone masonry. The structures are in varying states of preservation, and in some cases 4-5 courses of rock walling remain. The entrances to the three

structures on the plain/terrace are on the eastern side of the structures.

The thirteen examples located at the base of the mountains opposite are set into the hillside. These are similar in shape and visible entrances are located on the western side of the structures.

Located close to the structures on the wadi plain is one small circular-shaped cairn, similar to those recorded elsewhere during the survey and of presumed pre-Islamic date.

No ceramic or other material evidence was noted at the site and both the date and function of these features is unclear.



Figure 12. Large cairn at Site WM-10

Site WM-10
Cairn (pre-Islamic)
GPS:
 N 25.15564
 E 56.30218

A large deflated circular-shaped burial cairn, with a visible central chamber, located close to Site WM 9 on the wadi plain.

Site WM-11
Structure and pre-Islamic graves
GPS:
 N 25.15451
 E 56.30412

Located to the south of sites WM-9 and WM-10 in a tributary wadi and close to the base of the mountains, this site includes a small semi-circular-shaped structure and two circular-shaped pre-Islamic period graves.



Figure 13. Pre-Islamic grave at Site WM-11



Figure 14. Oval structure at Site WM-13

Site WM-12
Pre-Islamic graves
GPS:
 N 25.15396
 E 56.30799

A group of pre-Islamic burials at the entrance to a tributary wadi and close to the base of the mountains, near the dirt track that leads into this wadi. Archaeological features present include four circular-shaped graves and one group of three circular-shaped conjoined graves. One body sherd of Fine Ware (orange) ceramic was noted, dating to the Islamic period (and, therefore, not associated with the graves).

Site WM-13
Oval structure
GPS:
 N 25.15838
 E 056.30736

Located in a tributary wadi, a heavily disturbed oval structure on the terrace on the south side of, and above, a small wadi bed, aligned roughly N-S. Dimensions c. 6 metres by 3 metres. No associated finds.



Figure 15. Large rectangular structure at Site WM-14, facing north-east

Site WM-14
Rectangular building
GPS:
N 25.15884
E 056.30767

On the raised central terrace, near the south-western edge of a tributary wadi, the site comprises a large rectangular structure, partly dug into hillside at the upper (northern / north-eastern) end, constructed of locally available boulders, with a double-skinned wall and small gravel infill. Approximately 6 metres (northern & southern end) by 12 metres. At the lower, southern, end of the East-facing wall, is a small roughly-rectangular extension, with heavily disturbed walls, approximately 3 metres by 3 metres. A possible doorway is present approximately half-way along east side. Up to four courses of stone walling survive. A second, small, heavily-disturbed structure is a few metres away from the NW corner, under a thorn tree.

Site WM-15
Pre-Islamic grave
GPS:
N 25.15635
E 56.30955

One small circular-shaped pre-Islamic grave located in the lower half of the wadi plain in a tributary wadi, comparable to other sites (e.g. WM-2, WM-3, above). No visible ceramics or other finds.

Site WM-16
Pre-Islamic grave
GPS:
N 25.15314
E 56.31136

A figure-eight type pre-Islamic grave consisting of two circular-shaped burials. Located in the lower half of the wadi plain in a tributary wadi. No visible ceramics or other finds.

Site WM-17
Pre-Islamic grave
GPS:
N 25.15160
E 56.31094

A small circular-shaped pre-Islamic grave located in the lower half of the wadi plain. No visible ceramics or other material.



Figure 16. U-shaped structure at Site WM-18

Site WM-18

Group of pre-Islamic graves and rock-built structures, located between the following GPS coordinates.

GPS:

N 25.15142

E 56.31193

N 25.15214

E 56.31213

These features are located in the lower half of the wadi terrace of a tributary wadi, close to the base of the mountains and a small jebel on the side of the plain. The features include a small circular-shaped grave; a badly

deflated U-shaped structure built with mountain rocks, (where two, badly eroded body sherds of Iron Age type were noted; an irregular-shaped rock-built wall (?), consisting of a double row of rocks with a rubble fill (one body sherd present, of indeterminate type); another irregular-shaped wall (possibly the corner of a building), constructed with a double row of mountain rocks and a rubble fill; a Red Coarse Ware body sherd, (Islamic period); a second small circular-shaped grave; and a large circular-shaped deflated structure (indeterminate usage); a rim sherd of Fine Ware (cream) from an Islamic period water vessel.

Note: Subsequent survey in early 2008 identified several potsherds of mid-Islamic date.



Figure 17. Fragment of a wall at Site WM-18



Figure 18. Possible conjoined pre-Islamic graves at Site WM-19.

Site WM-19

Conjoined graves (?) of pre-Islamic date

GPS:

N 25.15080

E 56.31305

A rock-built feature consisting of an oval-shaped structure with two circular-shaped structures at either end. They may be pre-Islamic graves. This feature is located on the plain at the base of a small *jebel* at the entrance to a tributary wadi. The area is heavily disturbed due to relatively recent activity. No visible ceramics or other material.

Site WM-20
Islamic period remains

(Site WM-20A)
GPS: (Two oval-shaped features)
N 25.15198
E 56.31626

GPS: (Courtyard house and animal enclosure)
(Site WM-20B)
N 25.15091
E 56.31603

Towards the centre of a tributary wadi are two oval-shaped rock-built structures, likely to be related to the Late Islamic period remains located at the entrance to the wadi. These comprise the remains of a 'courtyard' house with an adjacent enclosure for livestock.



Figure 19. Oval-shaped structure, Site WM-20



Figure 20. Courtyard house and adjacent animal enclosure at Site WM-20

Site WM-21

Group of rock-built features

GPS:

N 25.14988

E 56.31665

A group of rock-built features located southeast of the entrance to a tributary wadi, on the plain but close to the base of the mountains. One structure consists of a long, irregular-shaped wall, built with a double row of rocks and a rubble fill. There is a possible figure-of-eight type grave but this is unclear. A rectangular-shaped structure with rounded corners is also present, which may be the remains of a badly-deflated *khaimah* type house of Islamic date. There is a large amount of relatively modern building activity in the immediate vicinity. No visible ceramics or other material noted.



Figure 21. Possible figure-of-eight type pre-Islamic grave at Site WM-21

Site WM-22

Late Islamic period courtyard house

GPS:

N 25.14939

E 56.31656

This site is located close to Site WM-21 and is situated on the central wadi plain. It consists of a large walled rectangular-shaped room built with mountain rocks, with an entrance along the southern (long) wall. The walls are preserved to a height of five courses. Attached to the front of the room is the remains of a low courtyard wall built with modern concrete blocks, added fairly recently, although there is no material evidence to indicate the date of construction of the large room. It is presumed to be of Late Islamic date.



Figure 22. Remains of room at Site WM-22

Site WM-23

Large rectangular-shaped structure

GPS:

N 25.14883

E 56.31948

Located at the base of the mountains, to the north of the entrance to the northernmost tributary wadi, Site WM-23 is a large, rectangular-shaped structure, constructed of mountain rocks and with patches of cement present along the walls, indicating relatively recent repair.

The interior contains a smaller room, constructed of cement blocks, built into the northeast corner and a small hearth at the front.

Ceramics (potsherds) present included a single Islamic period Red Coarse Ware sherd and two Iron Age body sherds.

The walls of this structure are quite wide and now badly deflated and it is possible that this feature represents an earlier building (purpose unknown), which was altered during the Late Islamic period. The existence of a large rectangular building in this area has been previously noted, by Anne Benoist, of the CNRS – France, who suggested that it might be of a pre-Islamic date (Benoist 2002: 44). This seems highly probable.



Figure 23. General view of deflated stone structure at Site WM-23

Site WM-24
Water bund (?)
GPS:
N 25.15049
E 56.32254

Located towards the rear area of the northernmost tributary wadi is a raised, curved wall, built into the slope of the wadi. It may be a water bund (deflector), to facilitate the collection of rainwater for irrigation. There were no visible ceramics or other material and the date of the feature cannot be determined.

Site WM-25
Water well
GPS:
N 25.14262
E 56.32025

Located on the central plain of Wadi Madhab, close to the Islamic cemetery, Site WM-25 is a well-maintained Late Islamic period water well.



Figure 24. Late Islamic period water well, Site WM-25

Site WM-26
Islamic Cemetery
GPS:
N 25.14065
E 56.31844

A large Islamic cemetery located on a large, low-lying mound, rising from the wadi plain behind the Ain Al Madhab Park. The cemetery was last used around 13 years ago (*see above*) and the site is fenced off.



Figure 25. General view of Islamic cemetery, Site WM-26

Site WM-27**Mounds****GPS:****N 25.14011****E 56.31771**

This site is located directly beside the Islamic cemetery to the south. It consists of three large mounds, for which there appear to be four plausible explanations:

a) they are related to the removal and piling up of soil for agricultural purposes,

b) they contain earlier Islamic graves, from which the stone markers have now disappeared,

c) they contain settlement/burial remains (period indeterminate),

d) they were formed naturally.

Two sherds of Islamic period fine ware ceramic were noted on the surface of one mound although these may not be representative of any archaeological material that may be present below the surface since such pottery is widely distributed in the area.



Figure 26. View of mounds, showing rise in ground level, at Site WM-27

Site WM-28**Pre-Islamic grave****GPS:****N 25.14808****E 56.31360**

Located on the central wadi plain of Wadi Madhab, close to, and on the Fujairah City side of, a large rectangular plantation, this site is a relatively well-preserved small circular-shaped grave. No visible ceramics or other archaeological material.

Site WM-29**Falaj****GPS:****N 25.14476****E 56.30781**

Located on the central wadi plain, beside the dirt track, is a long 'wall', which resembles a silted-up water irrigation channel/*falaj* stretching for a distance of c. 130m. It appears to be badly disturbed. No visible ceramics or other archaeological material. A number of large depressions in the surrounding area are reminiscent of old, silted-up agricultural plots.



Figure 27. Portion of possible old *falaj*, Site WM-29

Site WM-30

Rectangular structure

GPS:

N 25.14595

E 56.30645

Located on the central wadi plain close to the previous site, WM-29, is a large rectangular-shaped, rock-built structure. It has wide walls with rubble fill. It is badly deflated and disturbed. No visible ceramics or other archaeological material. Its date and function is unclear.



Figure 28. General view of structure at Site WM-30

Site WM-31

Group of pre-Islamic graves

GPS (Located within the following coordinates)

N 25.14665

N 25.14652

E 56.29702

E 56.29731

N 25.14664

N 25.14665

E 56.29746

E 56.29723

Located on the western part of the main wadi plain, at the base of the mountains are the following features: a badly-deflated, large 'figure-of-eight' type grave (?) and six circular-shaped graves.



Figure 29. Possible figure-of-eight type grave at Site WM-31

Sites recorded during December 2008 follow-up survey

In the general vicinity of the Site WM-18 group of sites, two further, individual, cairns were noted which had not been recorded in the original survey. These lie close to each other, and are separated by several dozen metres from the nearest sites in the WM-18 group, from which they are divided by a shallow wadi.

Site WM-38

N 25.15256

E 056.30136

Circular stone cairn, probable pre-Islamic burial

Site WM-39

N 25.15239

E 056.31052

Circular stone cairn, probable pre-Islamic burial

Sites identified during previous surveys

Descriptions are summarised from earlier publications and from Ziolkowski 2007. No illustrations are presented for these sites.

Site WM-32

(Ziolkowski: 2007).

Petroglyphs

N 25.14783

E 56.32694

The site is situated in the northernmost tributary wadi and consists of three large rocks with petroglyphs, several circular-shaped pre-Islamic graves, comparable to other examples elsewhere in the Wadi Madhab area, three circular-shaped rock enclosures and remnants of stone walling. It is located at the end of a dirt track that skirts the base of the mountains.

The petroglyphs are made with an outline formed by percussion, and include the following types of design:

Anthropomorphs (rider {and horse}, various).

Geometric (ovoid {foot}, various).

Zoomorphs (horse {and rider}).

Site WM-33

Previously published as Site 68 (Ziolkowski 2002:I: 164); (Swiss Site 61; Corboud et al. 1990: 29; 1991: 19). Beatrice de Cardi also noted a large number of burial cairns in the vicinity (de Cardi 1971: 256).

Lookout and pre-Islamic burials.

N 25.142638

E 56.327388

The site contains five pre-Islamic cairns, stone-built walls and raised platforms. The cairns are similar to those noted at Sharm, Bidyah, Qidfa, Qurayyah and Saqamqam, as well as elsewhere in Wadi Madhab. Two stone walls were also noted, plus a circular-shaped rise with a flat surface and stone retaining wall (Ziolkowski 2002:I: 164). The Swiss survey team recovered Iron Age period ceramics from this site (Corboud et al. 1991: 19). The dating for the walling is unclear. It may be defensive in nature and related to the Islamic remains in the area.

Site WM-34

Previously recorded as Site 69 (Ziolkowski 2002:I: 164-5); (Swiss Site 60; Corboud et al. 1990: 29; 1991: 19). This site was first noted by Beatrice de Cardi (Site 24, Husn Madhab) (de Cardi 1971: 255).

Husn Madhab – Iron Age fort

N 25.144055

E 56.32675

An Iron Age fortress situated on the low-lying slopes of the mountains overlooking the plain of Fujairah. This hilltop fortress was built from locally sourced mountain rocks in dry stone masonry. The site contains a perimeter wall with an entrance on the northeastern side. Attached to the wall at various points are eight internal rooms or units.

The Swiss-Liechtenstein team excavated three trenches at this site in 1993 and noted the importance of this site due to its dimensions and the state of preservation (Corboud et al. 1994: 5-6). Ceramics from the site were studied by Anne Benoist, and she has subsequently dated the site to the end of the Iron II / beginning of the Iron III periods (Benoist 2002: 44). (Iron II: 1100-600BC; Iron III: 600-300BC). Benoist has noted the possibility of further Iron Age remains in the area (Benoist 2002: 44). According to Potts, the remains of a *falaj* of uncertain date is located nearby the Iron Age fortress (Potts 1990: 374).

One of the authors (MCZ) has also recovered Islamic period ceramics from the site and has proposed that it may have been re-used in later periods (Ziolkowski 2002:I: 164-5).

Site WM-35

Previously published as Site 70 (Ziolkowski 2002:I: 165); Swiss Site 62 (Corboud et al. 1990: 29; 1991: 19).

Defensive walls and pre-Islamic burials

GPS :

N 25.144638

E 56.326972

This site consists of eight pre-Islamic burial cairns and various stone wall fragments located on the low-lying slopes of the mountains, which overlook the plain of Fujairah. The cairns are similar to those noted elsewhere in Wadi Madhab and its tributaries, and elsewhere along

the UAE East Coast. The stone walls are constructed with dry stone masonry or a double row of mountain rocks with mud mortar and rubble fill (Ziolkowski 2002:I: 165). The Swiss survey team recovered Iron Age period ceramics from this site (Corboud *et al.* 1991: 19).

Site WM-36

Previously published as Site 71 (Ziolkowski 2002:I: 165); Swiss Site 36 (Corboud et al. 1988: 28; 1991: 13).

Fortification and pre-Islamic burials

GPS:

N 25.144833

E 56.329

This site consists of pre-Islamic burial cairns and a stone built wall constructed with mountain rocks in dry stone masonry. In this area, the Swiss survey team recorded a total of 76 pre-Islamic burial cairns. The sizes of these cairns vary in diameter from 1.5 to 3.5 metres (Corboud *et al.* 1991: 13).

Site WM-37

Previously published as Site 72 (Ziolkowski 2002:I: 165-7); Swiss Site 7 (Corboud et al. 1988: 22; 1991: 7). This site was first noted by Beatrice de Cardi (de Cardi 1971: 255-6).

Islamic period fortified settlement (Husn Awlad Braik)

GPS:

N 25.14392

E 56.32412

A defensive zone containing various structures and lookouts. The site is situated on the low-lying slopes of the mountains overlooking the plain of Fujairah and the plain of Wadi Madhab. This site contains a perimeter wall constructed with a double row of mountain rocks with a rubble fill. An entrance is located on the southeastern face. The walls contain defensive firing slots. Within the perimeter wall is a stone tower, square-shaped with rounded corners. The tower was constructed with a double row of mountain rocks containing mud mortar and gravel fill. The site contains two lookouts located outside the perimeter wall. The first lookout overlooks the entrance to Wadi Madhab, and the second overlooks the interior of the wadi.

This site is comparable with the Islamic period hilltop fortress in Wadi Safad, Fujairah. The construction techniques and layout are similar. For details see: King 1994; King & Maren-Griesbach 1999: 10-18; Longden & Garfi 2000: 5-7.

Local sources have noted (to MCZ) that this hillfort was already old by the time of the leadership of Sheikh Hamad bin Abdullah al-Sharqi in the late 19th century (Ali bin Abdullah, *pers. comm.*: 2004). While it is not possible to sight Fujairah fort from this hill-fort, one can see the western half of the plain of Fujairah including the entrance to the Wadi Ham, and the southeastern shoreline. However, the Iron Age hillfort (Site WM-34) can be sighted from the Islamic hillfort, and from this

point one could see the fort and village of Fujairah. The base of the mountain contains a number of associated structures, including eleven rectilinear, semi-subterranean stone structures (*khaimah* type buildings), two rectangular-shaped structures of dry stone masonry, and one rectangular structure built with a double row of mountain rocks and rubble fill (Ziolkowski 2002:I: 165-6).

Ceramic sherds collected from the site have been dated from the 14th to 20th Centuries AD (Ziolkowski 2002:I: 239-53).

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Bibliography

Benoist, A. (2002) *Archaeological Investigations in Fujairah 2000*: a preliminary report. Unpublished report lodged with the Fujairah Museum.

de Cardi, B. & Doe, D.B. (1971) "Archaeological Survey in the Northern Trucial States". *East and West* 21/3-4: 225-289.

Corboud, P., Hapka, R. & Im-Obersteg, P. (1988) *Archaeological Survey of Fujairah, 1 (1987): Preliminary Report First Campaign of the Archaeological Survey of Fujairah (United Arab Emirates)*. Bern, Vaduz, Genève & Neuchâtel: Swiss-Liechtenstein Foundation for Archaeological Research Abroad.

Corboud, P., Castella, A-C., Hapka, R., Im-Obersteg, P. & Garczynski, P. (1990) *Archaeological Survey of Fujairah, 2 (1988-1989): Preliminary Report Second and Third Campaigns of the Archaeological Survey of Fujairah (United Arab Emirates)*. Bern, Vaduz, Genève & Neuchâtel: Swiss-Liechtenstein Foundation for Archaeological Research Abroad.

Corboud, P., Castella, A-C., Hapka, R. & Im-Obersteg, P. (1991) *Archaeological Survey of Fujairah (1987-1990): Inventory of the Sites*. Genève & Neuchâtel: Swiss-Liechtenstein Foundation for Archaeological Research Abroad.

Corboud, P., Castella, A-C., Hapka, R. & Im-Obersteg, P. (1994) *Archaeological Survey of Fujairah 3 (1993): Preliminary Report of the 1993 Campaign of the archaeological survey of Fujairah (United Arab Emirates)*. Bern, Vaduz, Genève & Neuchâtel: Swiss-Liechtenstein Foundation for Archaeological Research Abroad.

Jasim, S. (n.d) *Excavations at Traif-Kalba: The Emirate of Sharjah*. A seventh report. Sharjah Archaeological Museum.

King, G.R.D. (1994) Report to His Highness Sheikh Hamad bin Mohammed Al Sharqi, Supreme Council Member and Ruler of Fujairah. A preliminary archaeological assessment of Wadi Safad, Fujairah, U.A.E. (*unpublished*).

King, G.R.D. & Maren-Griesbach, H. (1999) "A preliminary survey of the archaeology of the Wadi Safad, Fujairah, United Arab Emirates, 13th-15th April, 1995" **Tribulus 9:2**: 10-18.

Longden, G. & Garfi, S. (2000) "An archaeological and architectural evaluation of a fort in the Wadi Safad, Emirate of Fujairah" **Tribulus 10:1**: 5-7.

Potts, D.T. (1990) *The Arabian Gulf in Antiquity*, Vol I. Oxford: Oxford University Press.

Weeks, L.R. (2000) *Pre-Islamic Metallurgy of the Gulf*. Volumes I & II. Unpublished Ph.D. Thesis. University of Sydney, Australia.

Ziolkowski, M.C. (2002) *The Historical Archaeology of the Coast of Fujairah, United Arab Emirates: from the Eve of Islam to the Early Twentieth Century*, Volumes I & II. Unpublished Ph.D thesis. Near Eastern Archaeology, University of Sydney, Australia.

Ziolkowski, M.C. (2003) "A preliminary survey and excavations in the Wadi Saqamqam, Fujairah, U.A.E." **Tribulus 13:1**: 3-16.

Ziolkowski, M.C. & al-Sharqi, A.S. (2005) "Bayt Sheikh Suhail bin Hamdan al-Sharqi, al-Fara, Fujairah, United Arab Emirates" In P. Hellyer & M. Ziolkowski (eds), *Emirates Heritage (Volume 1): Proceedings of the 1st Annual Symposium on Recent Palaeontological and Archaeological Discoveries in the Emirates Al Ain*, 2003. Al Ain: Zayed Centre for Heritage and History: 102-120.

Ziolkowski, M.C. & al-Sharqi, A.S. (2005) "Bayt Sheikh Suhail bin Hamdan al-Sharqi, al-Fara', Fujairah, United Arab Emirates: An ethnoarchaeological study" *Arabian Archaeology and Epigraphy 16.2*: 183-255.

Ziolkowski, M.C. & al-Sharqi, A.S. (*in press*) "Fujairah Fort and Associated Settlement: A study based on historical, archaeological and ethnographic and information" In P. Hellyer & M. Ziolkowski (eds.), *Emirates Archaeology, Volume 2: Proceedings of the 2nd Annual Symposium on Recent Palaeontological and Archaeological Discoveries in the Emirates*.

Ziolkowski, M.C. (2007) "Rock on art: petroglyph sites in the United Arab Emirates" **Arabian Archaeology and Epigraphy 18**: 208-238.

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