

The Traditional Mosques of Dalma, Abu Dhabi Emirate

by G.R.D. King

Ground-plans and elevational drawings by David Connolly

Dalmâ island is situated 40 kms off the mainland of the Western Region of Abu Dhabi¹. It is by far the most heavily populated of Abu Dhabi's islands, with its people originating from among the mainland tribes of Abu Dhabi and *huwâla* Arabs from the Iranian coast. Its principal town, also called Dalmâ, is at the southern tip of the island, an area where there has been settlement since the Late Stone Age, thanks to the presence of plentiful sweet water reached by shallow wells. During a survey of Dalmâ by the Abu Dhabi Islands Archaeological Survey (ADIAS) in 1992, three mosques, the Muhammad b. Jâsim al-Muraykhî mosque, the al-

Dawsarî mosque and the Sa'îd 'Alî al-Muhannadî mosque, and a commercial building, the Bayt al-Muraykhî pearl-house, were recorded. They are all in the old town centre and they are all built in traditional regional style².

An inscription in one of these buildings, the al-Dawsarî mosque, gives a foundation date of *Shawwâl*, 1349/March, 1931. There was also a *graffito* in the Sa'îd 'Alî al-Muhannadî mosque (formerly known as the Sa'îd 'Alî al-Qubaysî mosque) dated to 1377/1946, which gives a *terminus ante quem* for this building.

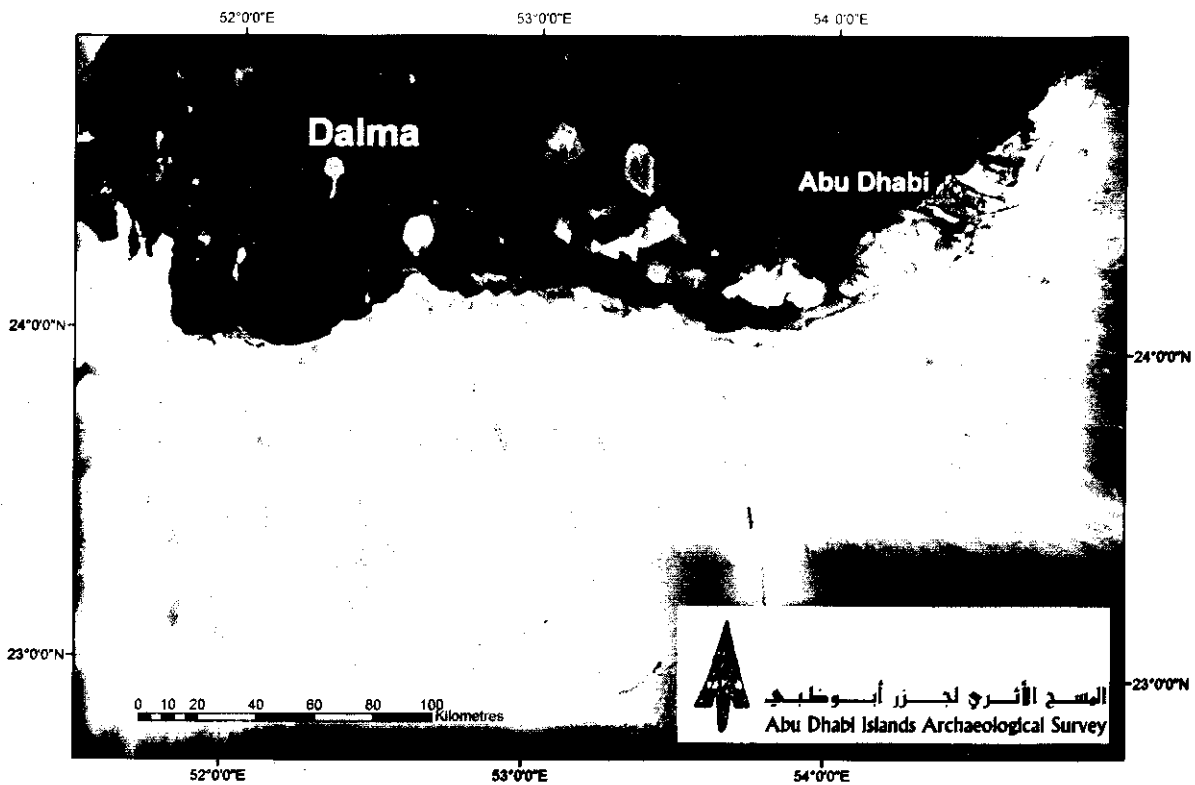


Plate 1. Map, Dalmâ and the Western Region of Abu Dhabi.

¹The Abu Dhabi Islands Archaeological Survey (ADIAS) first carried out fieldwork at Dalmâ from 31st March to 11th April, 1992. Drawings and ground-plans of the mosques discussed here were produced by Mr David Connolly assisted by Ms Fiona Baker. The preliminary record of the buildings was also made by Mr Connolly and Ms Baker and revised by the present writer with Dr Cristina Tonghini, University of Venice, in subsequent visits to Dalmâ in 1993 and 1996. A further visit with Dr Mark Beech of ADIAS was made in April, 2004 to see the current state of the buildings. The results of the first season of fieldwork on the islands are recorded in G.R.D. King, *Abu Dhabi Islands Archaeological Survey (ADIAS 1): An Archaeological Survey of Sir Banî Yâs, Dalmâ and Marawah, (21st March to 21st April, 1992)*, Trident Press, London (1998), pp. 51-55 (translated into Arabic as *Al-Masah al-Atharî li-Juzar Abû Dhâbî*, Trident Press, London (2001), pp. 51-55). For the Bayt al-Muraykhî, see G.R.D. King, with architectural drawings by David Connolly, "Bayt al-Muraykhî: a later Islamic pearl merchant's house at Dalmâ, Abu Dhabi Emirate", *Tribulus, Journal of the Emirates Natural History Group* 14.1 (Spring, Summer, 2004), pp. 3-8.

²A short report on these buildings had been made over a decade earlier by Prof. S. Cleuziou. See G. Harter, S. Cleuziou, J.P. Laffont, J. Nockin and R. Toussaint, *Emirat d'Abu Dhabi. Propositions pour Dalmâ*, (Sept.-Oct., 1979), pp. 10-15. This report included ground-plans and photographs of this group of buildings, but it had had only limited circulation and I express my thanks to Dr C. Hardy-Guilbert for providing ADIAS with a copy.

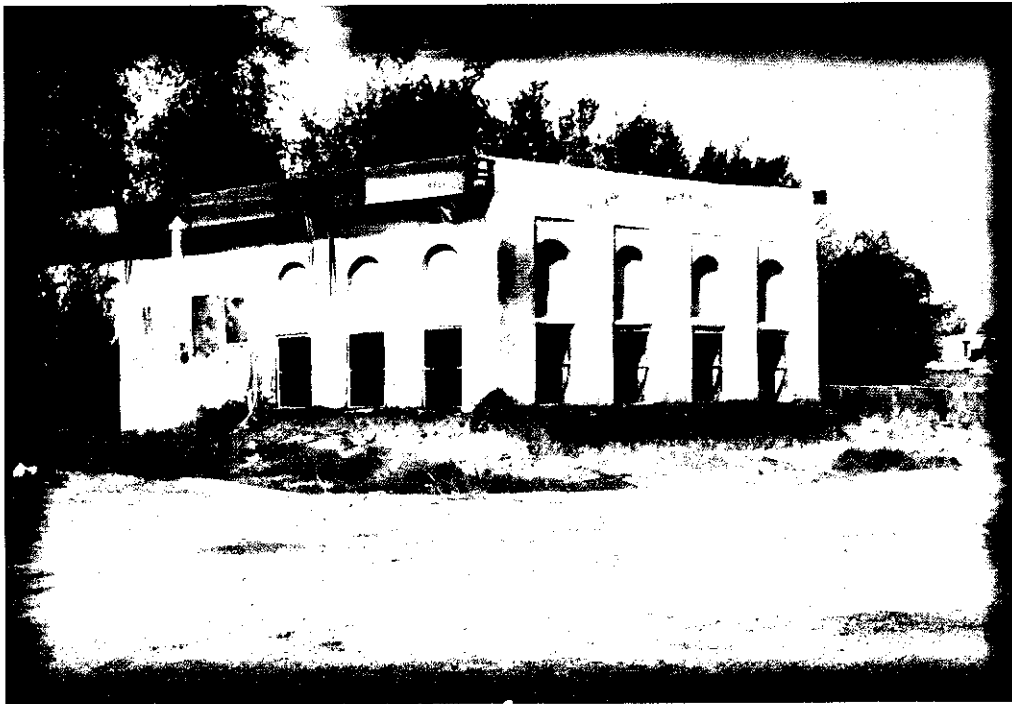


Plate 2. Al-Muraykhī mosque, exterior.

Local people thought that the other traditional buildings that lacked inscriptions (the Bayt al-Muraykhī and the Muhammad b. Jâsim al-Muraykhī mosque) were built at about the same time as the al-Dawsarī mosque. This seems to be a reasonable assumption given their shared stylistic similarities with the dated al-Dawsarī mosque.

When we first studied them in April 1992, these buildings were all dilapidated and their future was uncertain; indeed, a suggestion had been made that the mosques and the pearl merchant's house should all be demolished and rebuilt entirely. Fortunately, as a result of an ADIAS report submitted in 1992 to the Abu Dhabi authorities, instructions were given for their restoration and this was undertaken in 1993-4 by Dr ^oAbd al-Sattar al-^oAzzawī of the Sharjah Department of Antiquities³. The present account of the mosques is largely based on their appearance as they were when we first studied them in 1992, i.e., before restoration.

The Muhammad b. Jâsim al-Muraykhī Mosque

The Muhammad b. Jâsim al-Muraykhī mosque was no longer in use when we first examined it in 1992. Today, it has been restored and it serves as a museum⁴. It is situated west of the site of the old *sūq* of Dalmā which had been demolished some years before 1992⁵. The National Bank of Abu Dhabi to the north of the mosque now stands where part of the *sūq* used to be. Land filling had led to considerable change to the area around the mosque by the time of our 1992 visit, but we

were informed that the sea had once reached to a point about 50 m. to the south of the mosque. It must have come in close to the north as well, judging by traces of the old shoreline in that area.

The al-Muraykhī mosque was built of beach-stone and coral and it was covered in gypsum plaster which was painted pale green on the exterior when we first saw it. The interior was white and there were also some cement repairs. Now the plaster has been replaced by the restoration team. Some of the original decorative plaster from around the *mihrâb* is in the present Bayt al-Muraykhī museum display.

The entire mosque in 1992 was raised on a banked masonry platform about 1 m. above present ground level. This platform served to protect the mosque against damp rising from the saline soil and it also served to cast off rain-water. The mosque enclosure as a whole measured 14.2 m. x 17.12 m. externally and it was oriented to *qibla* at 265°. It had a flat roofed prayer-hall on the western side towards the *qibla*: this prayer-hall measured 12.90 m. x 7.30 m. internally.

An open courtyard lay on the east side of the prayer-hall, outlined by a low wall. In the NE corner of the courtyard was a slightly banked platform, measuring 1.02 m. x 0.87 m. at the base, built against the courtyard wall and to the exact height of the courtyard wall. It was explained to us as being a prayer-call platform and in its position it matched a similar prayer-call platform in Mosques II and III which the British team had excavated in 1991-1992 at Julfâr (Ra's al-Khaimah): these Julfâr mosques are dated to ca 14th/15th century⁶.

³An account of these buildings and their restoration has been published by Dr ^oAbd al-Sattâr ^oAzzawī. See Murshid al-mubânî al-turâthîya fî jazîra Dalmâ, Abu Dhabi (1418/1996). See also King, Abu Dhabi Islands Archaeological Survey....., pp. 51- 52 and Al-Masah al-Atharî li-Juzar Abû Dhabi....., pp. 51- 52.

⁴A second, larger museum has also been established in the Bayt al-Muraykhī pearl-house nearby.

⁵In the course of the restorations by the Sharjah Department of Antiquities, structures were found beneath the al-Muraykhī mosque and close to the Bayt al-Muraykhī pearl house. These were accompanied by late Islamic ceramics of the Julfâr horizon, i.e., ca 14th/15th-19th C. AD. These ceramics are now on display in the al-Muraykhī mosque and in the Bayt al-Muraykhī museum.

⁶This prayer-call platform was not reinstated during the restoration.

There was no trace of a *hammâm* at the al-Muraykhî mosque in 1992 although foundations were found during the restorations and a new *hammâm* was subsequently constructed on the alignment of the old walls. The excavations during the restorations also exposed two circular stone-lined wells with water at about 3 m. depth. Earlier underlying structures with no relation to the mosque were also discovered: these were probably later Islamic in origin, judging by the pottery recovered⁷.

The al-Muraykhî mosque enclosure is entered by a single entrance set at the southern end of the east wall of the courtyard. It was approached by a rough earth ramp in 1992 but there may have been a step here originally. The floor of the courtyard was slightly lower than the level of the prayer-hall floor, and it was unpaved, although some traces of plaster were visible in the central area.

The prayer-hall has three rectangular entrances in the east wall, the central one aligned with the *mihrâb* in the centre of the *qibla* wall on the interior. The doors had all vanished by 1992. Above each entrance were square decorative blind grilles in plaster with the grille over the central entrance emphasised by a decorative circular motif and a star. These grilles were reinstated during the restorations.

Flanking the three doorways are rectangular windows, each with a wooden frame that in 1992 held iron bars, set vertically, a feature typical of old buildings throughout the Gulf region. Above each window is a blind rounded arch, corresponding to a similar recess on the interior. Local terminology for these windows is either *dârisha* or *daraysh*.

Internally, the prayer-hall is divided longitudinally by a row of four rectangular piers that create two aisles running parallel to the *qibla* wall. Surmounting the piers are stepped impost blocks forming simple capitals. Attached piers of similar design articulate the lateral walls of the prayer-hall which, along with the free-standing piers, serve to support the roofing system. The original roof had been replaced before 1992 but traces of some of the earlier wooden beams remained. The entire roof has now been reconstructed according to traditional methods by Dr 'Azzâwî's team.

The upper walls of the al-Muraykhî mosque interior above the piers terminated in a plaster *cavetto*, forming a continuous cornice running independently around the west (*qibla*) aisle of the mosque and around the rear (east) aisle. The corners of the two rectangular roofing units to east and west of the central colonnade were cut by a triangular decorative feature in plaster. This treatment of the corners is also found in the Bayt al-Muraykhî.

Above the cornice, the upper wall in 1992 carried traces of the wooden beams of the original roof which had been replaced by modern corrugated asbestos, work done by the Dalmâ *baladîya* (municipality) at some time before our first visit.

The mosque has a series of rectangular window units with blind round headed arches set back slightly in their rectangular frames. There are four windows in each of the north and the south lateral walls, three to either side of the *mihrâb* in the west wall, and one at either end of the east wall, flanking the doors. All the windows were closed in 1992 in the lower part by six iron bars set vertically.



Plate 3. Al-Muraykhî mosque, interior.

⁷This pottery is now displayed in the al-Muraykhî mosque museum and compares to the generally later Islamic pottery in the Bayt al-Muraykhî museum.

The *mihrâb*, vaulted by a barrel vault, is set centrally in the western wall. It is rectangular in ground-plan and is set within a larger rectangular plaster frame with a blind arch framing the *mihrâb* arch proper. This decorative frame rises the full height of the *qibla* wall. This suggests some degree of Iranian influence insofar as the design echoes the flat decorative frames often encountered in *mihrâbs* in Iran which in turn stem from the Great Mosque of 9th C. Samârrâ' of the 'Abbâsîd Caliph al-Mutawakkil.

On the exterior of the *mihrâb*, set at the outermost edge of the barrel vault was a narrow round column, about 1 m. high with a conical capping. It was the only mosque at Dalmâ with this feature and I have not encountered such a column elsewhere. Its presence was explained by local people as indicating that the mosque had *Shî'a* connections but if this is correct, it seems unusual even in *Shî'a* mosque architecture, to the best of my knowledge.

In the three inner faces of the *mihrâb* walls there are wind-catchers (*bâd gîrr*) set in rectangular recesses. These serve to ventilate the *mihrâb* interior and the forefront of the mosque. In the heat of a Gulf summer, these ventilating devices along with the openness of the mosque with its many windows were all sorely needed before the introduction of air-conditioning.

Al-Dawsarî Mosque

The al-Dawsarî mosque lies about 30 m. south of the National Bank of Abu Dhabi and to the north of the al-Muhannadî mosque⁸. The mosque was no longer in use in 1992 but prayer has resumed there since the completion of the restoration by Dr al-^cAzzâwî's team. It is constructed of beach-rock, coral and gypsum mortar. It was coated in white plaster and it had some repair in cement in 1992. This plaster has now been renewed.

The mosque measures overall 12.82 m. x 11.62 m. externally and it is oriented to 266° to *qibla*. It consists of a shallow rectangular courtyard on the east side and a prayer-hall preceded by a portico on the west (*qibla*) side. Built against the exterior of the courtyard on the south side is a *hammâm* room. There is a single entrance to the courtyard set slightly off-centre from the axis of the *mihrâb* in the prayer-hall. There is also access to the courtyard from the *hammâm* through the south wall of the courtyard.

The courtyard measures 4.00 m. x 11.00 m. and it merges with an open portico in front of the prayer-hall which lies on its west side. On the other three sides, the courtyard was defined by a somewhat irregular low stone balustrade. As the side walls of the courtyard did not align in 1992 with the lateral walls of the prayer-hall, we assumed that the courtyard was built later than the prayer-hall but by how much is unclear.

The portico is 3.80 m. deep and its lateral walls form one with the side walls of the prayer-hall. Attached columns terminate the eastern end of the portico side walls. In 1992, before the restoration, it appeared that the squared column on the south side incorporated an earlier circular column.

The roof of the portico formerly must have been supported by two columns similar to those attached to

⁸In an earlier account of this mosque (King, *Abu Dhabi Islands Archaeological Survey...*, pp. 52-53; and *Al-masah al-atharî li-juzar Abû Dhabi*, p. 54), it was misnamed on the basis of information we received at Dalmâ in 1992. We have since been informed that the mosque is called the al-Dawsarî mosque.

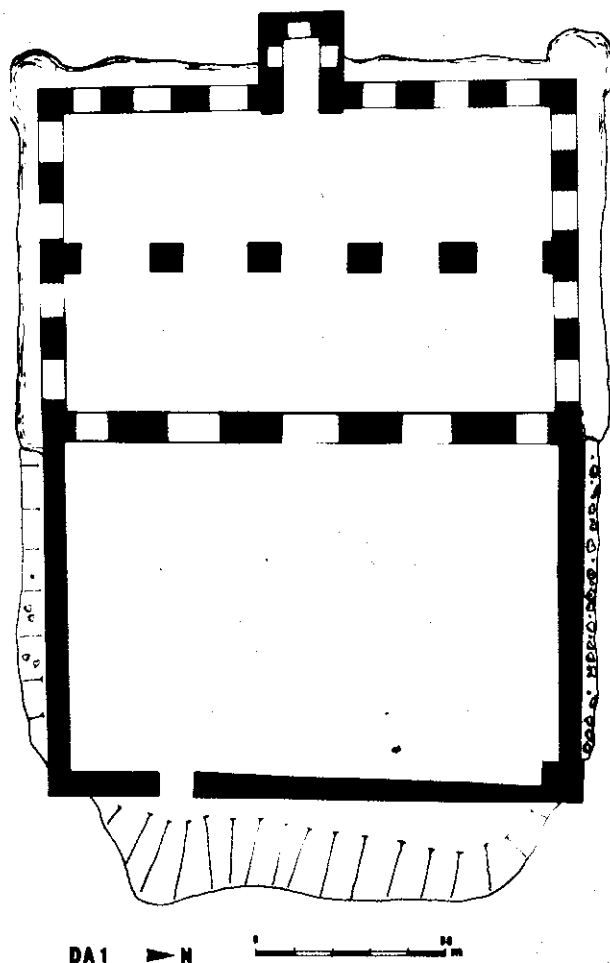


Plate 4. Al-Muraykhî mosque: ground-plan (by D. Connolly).

the lateral walls of the portico, but in 1992 these central columns had vanished and they had been replaced by squared wooden posts to support the portico roof. During the restorations, columns were reinstated.

The prayer-hall is shallow, measuring 10.2 m. x 3.57 m. In 1992, it had a flat roof constructed of mangrove poles and palm matting mesh (*basjîl*), covered externally by gypsum plaster. It was in a very poor condition when we first saw it.

There are three doorways in the east wall of the prayer-hall leading from the courtyard and the portico. Of these, one is nearly on axis with the *mihrâb* in the centre of the western (*qibla*) wall; the other two are set on either side. There were wooden double doors in each entrance in 1992, each with a decorated cover-strip. The door designs differed from each other but any significant difference was masked as they were badly weathered. These doors are now in the Bayt al-Muraykhî museum.

There are two rectangular windows in each of the lateral walls of the prayer-hall, all closed by vertical iron bars. The window units repeat the design already seen in the portico, the only difference being that the round-headed arches above these windows are blind. Each window in 1992 had plain wooden shutters.

The *mihrâb* in the centre of the *qibla* wall forms a large rectangular projection externally. It is roofed by a barrel vault, which slopes slightly down and away from the *qibla* wall. In the upper part of the south, north and west sides of the *mihrâb*, there are small openings to light and ventilate the interior. There is a niche for storing *Qur'âns* in the west side of the *mihrâb* with a moulded frame around it in plaster.

Inside the prayer-hall, surrounding the *mihrâb*, is set a rectangular recessed frame with moulded relief decoration. Within this panel is yet another set back panel, with a deeply cut geometric grille in plaster. The panel is similar to decorative plaster panels in plaster found at Târût in eastern Saudi Arabia and in the old Islamic architecture of Bahrain and Dubai. On either side of the *mihrâb* and below the decorative plaster panels were incised inscriptions in 1992. On the right was written:

"Bism Allâh al-rahmân al-rahîm"

Below was inscribed: *"Qad kamal al-binâ' bi-cawn al-khâliq al-samâ' fî shawwâl sanna 1349"*

"In the name of God the Merciful, the Compassionate. The building was completed with the help of the Creator of heaven in [the month of] Shawwâl of the year 1349 [March, 1931]".

The original inscription panel has now been removed to the Bayt al-Muraykhî pearl house museum.

Arranged on each side of the *mihrâb* in the *qibla* wall are four window units in groups of two. These windows are slightly different from those already described. There are rectangular window frames in the lower rank, each with seven vertical iron window bars. Above each window is a blind round-headed arch. Apart from these windows, there are a number of blind niches set in the interior wall surfaces: there are two in the inner face of the north wall, two in the south wall and two on either side of the *mihrâb* in the west wall.

On the exterior of the prayer-hall, at the point of junction of the *qibla* wall with the north and south side walls of the prayer-hall, there are attached quarter columns. Also on the exterior, at roof level on the *qibla* side in 1992 were four rectangular holes in various degrees of disintegration which once held wooden drainage spouts to carry rainwater off from the roof of the mosque.

Sa'îd b. 'Alî al-Muhannadî mosque

In contrast to the al-Muraykhî mosque and the al-Dawsarî mosque, the Sa'îd b. 'Alî al-Muhannadî mosque was still in use in April, 1992, with a large congregation regularly attending prayers there. Since the restorations, the mosque has remained in use for Friday prayers.

Before the restorations to the mosque, it had an inscription on a white marble plaque beside the door on the east side of the courtyard which named it as the Sa'îd b. 'Alî al-Qubaysî mosque. Since the restorations, it has been termed the Sa'îd b. 'Alî al-Muhannadî mosque.

It is the largest mosque of the Dalmâ group, measuring overall 21.80 m. x 17.57 m. It is oriented to *qibla* at 268° and it consists of a prayer-hall on the west side preceded by a portico with an open courtyard lying to the east. There is a *hammâm* at the south-east corner of the courtyard, built outside the enclosure. The mosque is constructed of beach rock and coral covered in gypsum plaster and it is now white-washed inside and out, as it was when we first studied it in 1992.

The courtyard measures internally 12.72 m. x 16.34 m. and it is surrounded by a low wall. In 1992, there was a single entrance on the north side with plain wooden double doors: these have been replaced, the original doors being displayed today in the Bayt al-Muraykhî museum. The courtyard was partly roofed with asbestos sheets in 1992, resting on modern timber and its floor was cemented. There was a wooden bier for funerals in the courtyard.



Plate 5. Al-Dawsarî mosque, exterior

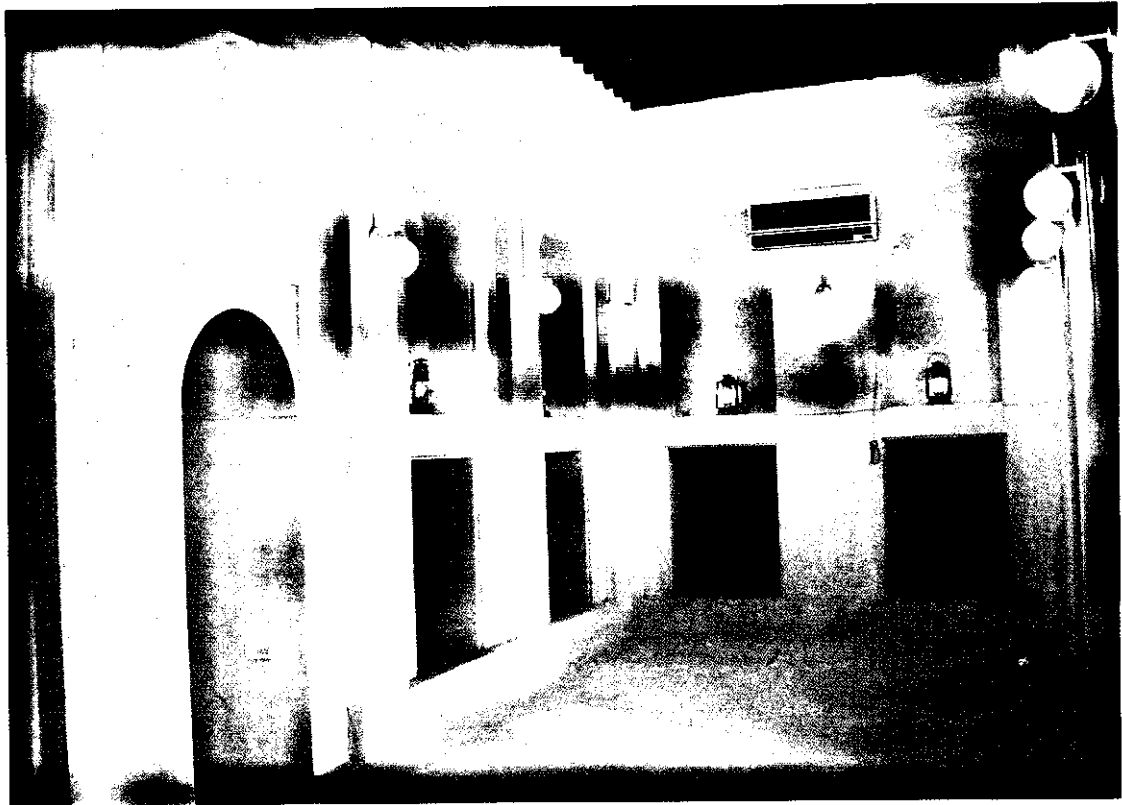
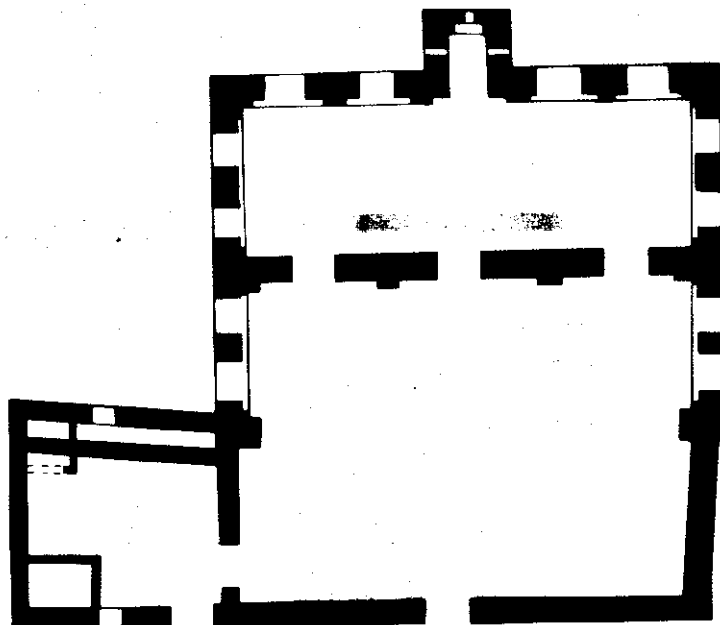


Plate 6. Al-Dawsari mosque, interior



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Plate 7. Al-Dawsari mosque: ground-plan (by D. Connolly).



Plate 8. Sa'īd b. 'Alī al-Muḥannadī mosque, exterior.

An open portico running along the west side of the courtyard and preceding the east facade of the prayer-hall forms a natural continuation of the court. Like the portico of the al-Dawsarī mosque, that of the al-Muḥannadī mosque is defined by two lateral walls (i.e., to north and south). These bond to the lateral walls of the prayer-hall. At their east ends, both lateral walls terminate in an attached column. Four octagonal columns run along the *qibla* side of the courtyard, parallel to the prayer-hall's east wall and supporting the roof of the portico.

In each of the portico lateral walls there are two rectangular windows. In 1992, they had wooden shutters which were closed and boarded up. Surmounting each window is a stilted round-headed arch set in a rectangular frame. The portico walls terminate at the summit in a cornice and an undulating moulding of plaster in relief.

When ADIAS first recorded the mosque in 1992, on the short stretch of wall between the two windows at the north end of the portico were two lightly incised *graffiti* representing boats, carved into the smooth gypsum plaster of the mosque walls. The plaster

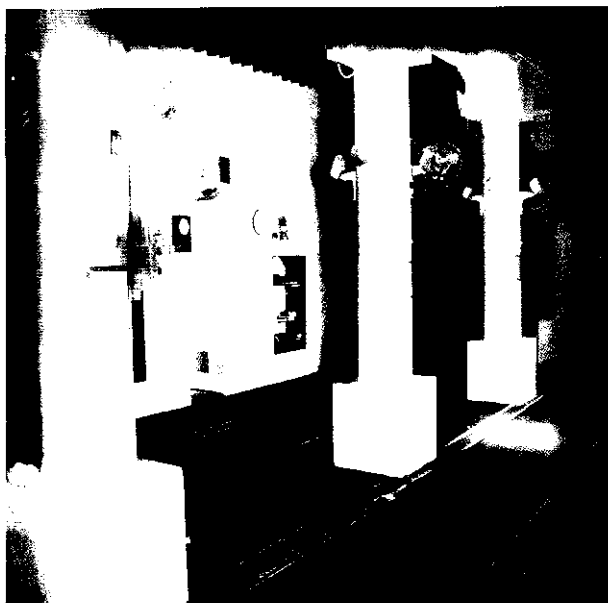


Plate 9. Sa'īd b. 'Alī al-Muḥannadī mosque, interior.

was falling away and much had been lost. The two drawings were already very fragile in 1992 and since then they have both been lost. The incised boat motifs are discussed below.

The prayer-hall of the al-Muḥannadī mosque measures 16.30 m. x 7.15 m. Its only access is from the east side where there are five doorways. The entrances are all rectangular, measuring 1.08 m. in width. The central entrance had its original wooden double doors *in situ* in 1992: these were lightly carved with elongated oval motifs on each leaf, whereas the other doors lacked decoration. The interior of the prayer-hall is divided by a row of four round columns forming two aisles that run north-south, parallel to the *qibla* wall. Their design corresponds to the half-columns attached to the lateral walls of the portico.

The columns inside the prayer-hall rest on square bases and they are set 2.65 m. apart from each other. They carry squared impost blocks with a moulded *cavetto* giving a capital-like effect. These impost blocks still carried the original wooden joists in 1992.

The upper wall areas of the east and the west aisles of the prayer-hall each have their own independent systems of cornices and raised undulating moulding like those already described in the portico. This independent treatment of the cornices in each aisle also occurs in the al-Muraykhī mosque.

The roofing of the prayer-hall was extant in 1992 and it was of traditional Gulf type with mangrove poles laid across the joists. These poles had been imported from India and supported a wood lattice which in turn carried a thin mesh of palm matting. It has now been renewed in traditional style in the course of the restorations.

The *mihṛāb* recess in the Sa'īd b. 'Alī al-Muḥannadī mosque is of particular note. It is set in the centre of the *qibla* wall, on line with the central door to the prayer-hall from the courtyard. It is rectangular in ground-plan, forming a projection on the exterior of the *qibla* wall. It is roofed like the other Dalmā mosques by a barrel vault. Internally, the niche is divided into two distinct elements, the *mihṛāb* proper to the left (south) and a fixed *minbar* built into the right (north) side of the niche. As a result, the *mihṛāb* is reduced to a width of a mere 0.77 m. with a thin wall dividing it from the *minbar*. An entrance from the *mihṛāb* leads into the *minbar* within

The *minbar* is fronted by a projecting rectangular screen whose upper ledge is stepped forward from the facade of the *qibla* wall. This ledge on the front of the *minbar* is decorated with an undulating relief decoration in plaster and with a *cavetto* below, both recalling the decoration already noted beneath the roofing of the prayer-hall. This *mihrâb-minbar* niche has a blocked air vent in the upper part of the west wall and mid-wall wind catchers (*bâd girr*) lower down in each of its three sides.

The incised drawings in the portico

Boat drawings have a long history in the Gulf and those found in 1992 incised into the plaster in the north wall of the portico of the al-Muhannadî mosque are a new addition to the *corpus* of such pictures. They were the first found in a mosque in the region. They are now lost along with the rest of the old plaster.

The boats in the two drawings identified and copied by Mr Connolly in 1992 were shown side-on to the viewer but the nature of the plaster breakage was such that in neither case was any single boat illustrated complete. In one case, half of a hull and a sail was visible, but the vertical break of the plaster had sliced away the other end of the boat and its sail; in the second case, two halves of separate hulls survived with two sails clearly visible, as well as rigging and perhaps a third sail. There were no human figures whatsoever. The pictures are dated 1377/1946 by a graffito on the second drawing.

There are number of similar boat representations elsewhere in the Gulf area. The earliest reported was found at Sirâf on the Iranian coast⁹. It was from an upper room of a palace, incised into the wall and it showed a three-masted boat.

D. Whitehouse, the excavator of Sirâf, suggested that it should be regarded as being of 11th C. AD date.

A group of boat drawings has been found incised in natural rock at Jabal al-Jussasiya on the north-east

coast of Qatar¹⁰. These include boats in profile like those which we found in the al-Muhannadî mosque. W. Facey argues that the boat drawings at al-Jussasiya should be dated to somewhere between 1600 and 1800, on the basis of ceramics found nearby although they could be older.

At al-Qidâ to the NW of Khasab in Musandam, Sultanate of Oman, there is also a boat drawing on boulders in the valley behind the town, but it is of indeterminate date. There are other instances of boat drawings in Dhofar, also in Oman.



Plate 10. Sa'îd 'Alî al-Muhannadî mosque: the mihrâb.

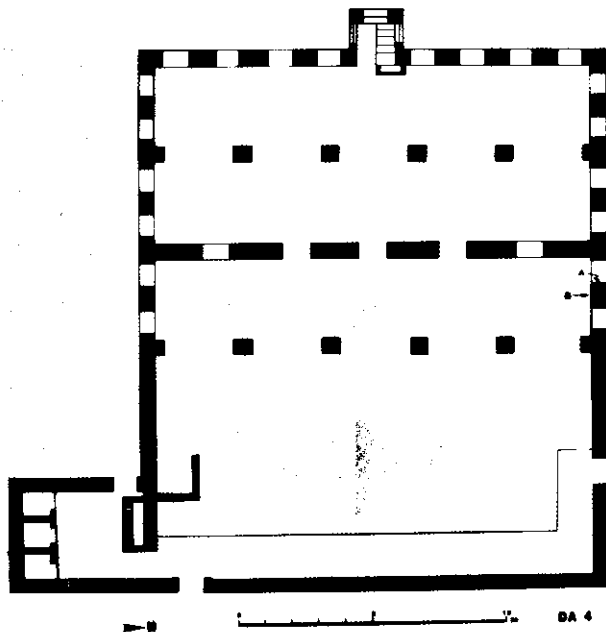


Plate 11. Sa'îd 'Alî al-Muhannadî mosque: ground-plan (by D. Connolly).

⁹ D. Whitehouse, "Excavations at Siraf. Fifth Interim Report", *Iran* x (1972), p. 74 and fig. 7, p. 75. I am grateful to Dr C. Tonghini for drawing my attention to this parallel.

¹⁰ B. de Cardi, *Qatar Archaeological Report: Excavations 1973*, Oxford (1978), p. 190 and Pls xxxi-xxxii.

H. Kapel, "Rock carvings at Jebel Jusasiyah, Qatar", *Arrayan*, no. 8 (unseen).

W. Facey, "The boat carvings at Jabal al-Jussasiyah, northeast Qatar", *Proceedings of the Seminar for Arabian Studies* 17 (1987), pp. 199-222.

D.F. Hawkins, "Primitive rock carvings in Qatar", *Proceedings of the Seminar for Arabian Studies* 17 (1987), p. 54.

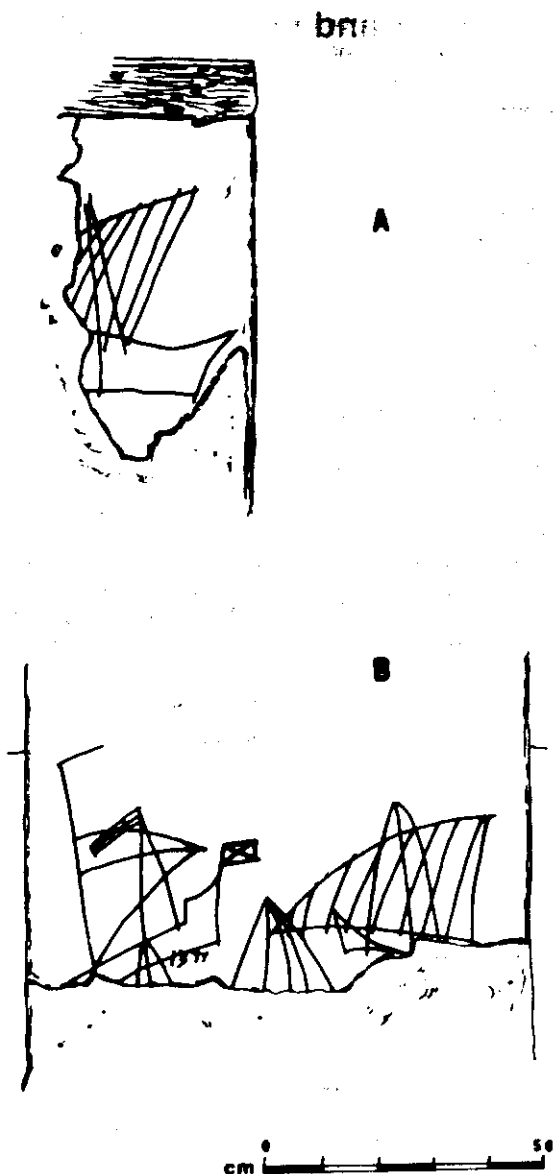


Plate 12. Boat drawings in the Sa'îd 'Alî al-Muhannadî mosque .

Summary

Throughout the Gulf countries, the ever-increasing pace of modernisation has been accompanied by the loss of the fragile architecture of earlier centuries, and this has been as much the case in Abu Dhabi as elsewhere in the region. Piety tends to ensure that mosques are among the first buildings to be modernized or rebuilt.

As a result, decreasing numbers of mosques and other old buildings survive in their original form in Arabia as a whole and it is rare now in the Gulf to find extant a group of traditional buildings like those concentrated in Dalmâ, all related closely in date and style. This loss elsewhere underlines the importance of the accident of survival of the Dalmâ mosques. The survival of a distinctive and related group of later Islamic buildings is fortunate and their restoration in 1993-4 is extremely welcome, for the mosques provide rare evidence of the architectural tradition of Abu Dhabi in the past and its relationship with the Islamic Gulf architectural tradition as whole.

Bibliography

Abd al-Sattâr Azzâwî, *Murshid al-mubâni al-turâthiya fi jazîra Dalmâ*, Abu Dhabi (1418/1996).

B. de Cardi, *Qatar Archaeological Report: Excavations 1973*, Oxford (1978).

G. Harter, S. Cleuziou, J. P. Laffont and R. Toussaint, *Emirat d'Abu Dhabi. Propositions pour Dalmâ*, (Sept.-Oct. 1979).

W. Facey, "The boat carvings at Jabal al-Jussasiyah, northeast Qatar", *Proceedings of the Seminar for Arabian Studies* 17 (1987), pp. 199-222.

D.F. Hawkins, "Primitive rock carvings in Qatar", *Proceedings of the Seminar for Arabian Studies* 17 (1987), pp. 53-61.

H. Kapel, "Rock carvings at Jebel Jusasiyah, Qatar", *Arrayan*, no. 8 (unseen).

G.R.D. King, *The Historical Mosques of Saudi Arabia*, London (1986).

G.R.D. King, "Excavations of the British team at Julfâr, Ras-al-Khaimah, United Arab Emirates: Interim Report on the Third Season", *Proceedings of the Seminar for Arabian Studies* 22 (1992), pp. 47-54.

G.R.D. King, *The Architectural Tradition of Saudi Arabia and its Neighbours*, I.B. Tauris, London (1997).

G.R.D. King, *Abu Dhabi Islands Archaeological Survey (ADIAS 1): An Archaeological Survey of Sîr Banî Yâs, Dalmâ and Marawah, (21st March to 21st April, 1992)*, Trident Press, London (1998); translated into Arabic as *Al-Masah al-Athari li-Juzar Abû Dhabi*, Trident Press, London (2001).

G. R.D. King with drawings by D.Connolly, "Bayt al-Muraykhi: a later Islamic pearl merchant's house at Dalmâ, Abu Dhabi Emirate", *Tribulus* 14.1 (Spring, Summer, 2004), pp. 3-8.

D. Whitehouse, "Excavations at Siraf. Fifth Interim Report", *Iran* x (1972), pp. 63-87.

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