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A Mosque at Khor Rori. New Evidence for the Islamic Period in Coastal Dhofar

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Abstract

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Introduction

Between the late 1990s and 2019, the Italian Mission to Oman (IMTO), under the direction of A. Avanzini (University of Pisa) conducted a long-term programme of archaeological research in the Dhofar Governorate, the southernmost region of the Sultanate of Oman, focused on the fortified town of Sumhuram (2nd century BC - 5th century AD; see Avanzini 2008, 2014; Pavan, Degli Esposti 2016; Buffa 2019) and its surrounding landscape (Fig. 1). In collaboration with the Office of the Adviser to His Majesty the Sultan for Cultural Affairs,[1] the mission undertook not only large-scale excavations inside the settlement, but also investigations in the area outside the city walls.[2]

Since 2018, new archaeological work has been undertaken under the direction of S. Lischi, currently concession holder for the area of Khor Rori, on the eastern promontory of Inqitat (al-Hamr al-Sharqiya) and in other areas of the Archaeological Park.

At Inqitat, IMTO campaigns in 2000 and 2001 identified two main phases of occupation, dated to the 10th century and to the transition between the late 10th and early 11th century (Avanzini *et al.* 2001, 49-59; Rougeulle 2008). Recent investigations, however, have provided new evidence for the use of the area over a broader chronological span, from the Bronze Age to the medieval period (Lischi 2019*a*, *b*, 2023).

Alongside these projects, a distinct line of research is carried out by the Italian Archaeological Mission of the University of Naples L'Orientale at Al Baleed and in the Dhofar region (IAMOB), directed by R. Giunta. The excavation and study of Al Baleed form the core of the mission's activities, but its scope also extends to the Islamic-period history of Dhofar more broadly. Within this framework, the study of the present mosque finds its place,[3] together with a series of coastal surveys already undertaken (Giunta, Pavan

[1] The Office of the Adviser to His Majesty the Sultan for Cultural Affairs ceased operations in 2020 and its functions were taken over by the Ministry of Heritage and Tourism of the Sultanate of Oman.

[2] These included the exploration of structures contemporary with the settlement - such as the lagoon-side temple (Pavan, Sedov 2008), several cave tombs carved into rocky outcrops north of the town, and a number of rectangular buildings to the east of Sumhuram, plausibly linked to agricultural activities. The latter are also attested in the wider territory by channels and small dams (Cremaschi, Negrino 2002; Cremaschi, Perego 2008, 567).

[3] This study was supported by the PNRR (National Recovery and Resilience Plan) project *Italian Strengthening of ESFRI RI Resilience* (ITSERR), funded by the European Union - NextGenerationEU (CUP: B53C22001770006). Thanks to this support, it has been possible to resume the study of material concerning the religious practices and contexts of the Nile Valley and beyond. The author served as Field Director for the Italian Mission to Oman (IMTO) during the excavation of the mosque at Khor Rori and is now Deputy Director of the Archaeological Mission of the University of Naples L'Orientale at Al Baleed and in the Dhofar region (IAMOB).

2022; Pavan 2024), and further investigations that are planned, including a survey in the inland area of wadi Nashib, where Islamic-period structures have been identified that may be connected to the little-known Manjawi (Minjuid, Manjuid) dynasty (Aston 2022, 2023) and a remote sensing survey in the area of Hasik.

Location and architectural features of the building

In January 2006, during the intensive geo-archaeological survey carried out by M. Cremaschi and A. Perego (2008), which recorded more than one thousand sites in the Khor Rori area, a concentration of well-dressed masonry blocks was observed about 1.2 km south-east of the ancient city of Sumhuram. This suggested the presence of one or more buildings. As part of the broader research undertaken by the University of Pisa at Khor Rori, aimed at a diachronic reconstruction of settlement patterns in the region, the remains of this structure were investigated.

The location was named as KR1182 and it was marked by the coordinates 17.03633N, 54.43964E (Fig. 1, top right).

The blocks lay on one of the branches of the lagoon formed by wadi Darbat, a seasonal river originating in the Jebel Qara region and flowing into the Indian Ocean, where it creates a lagoon. This lagoon, fed by karst springs, was once open but became closed by a sandbar that formed between the 3rd and 5th centuries AD (Hoorn, Cremaschi 2004, 27-28, fig. 12,3). Even today, the sand barrier is seasonally breached during the monsoon, when the increased water flow temporarily reconnects the lagoon with the sea.

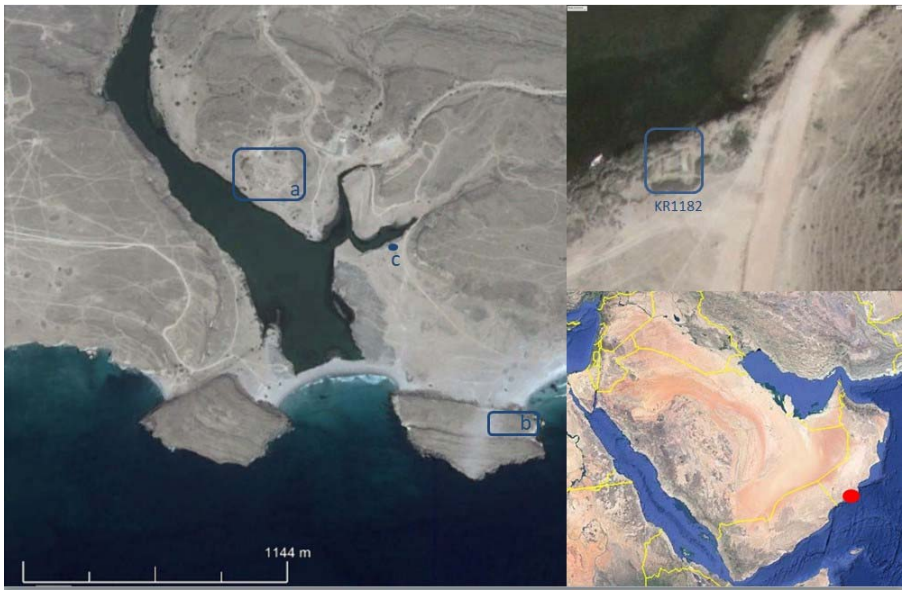

Fig. 1 - Left: the territory of Khor Rori with indication of the sites mentioned in the text: a) the settlement of Sumhuram, b) the settlement of Inqitat, c) the site KR1182; Top right: close-up of KR1182 with the remains of the mosque; Bottom right: the Arabian Peninsula with marked the region of Dhofar (elaboration from Google Earth by the author)

Prior to excavation, only limited wall alignments were discernible in the northern and north-western sectors of the building, whereas the eastern side was characterized by substantial accumulations of dressed and undressed stones, darkened by the so-called "desert dust" (Fig. 2). These accumulations are plausibly the result of the building's collapse and appear to represent the residual material left after the systematic removal of well-dressed blocks, which were most likely extracted for reuse in later constructions in the surrounding area. The blackening of the stones, despite its name of "desert dust", finds its reason in the action of micro-organisms belonging to the family of black fungi and it is typical of the ancient surfaces of the area which have been exposed to the atmospheric agents for a long time (Orazi 1997).

Fig. 2 - The area before the works in 2006 (photo A.V. Sedov, ©IMTO)

Beside the masonry blocks, architectural elements such as fragmentary pillars, elements of simple capitals and/or bases, dressed stones with intentional holes and portions of basins for the collection and conservation of water were found scattered in the area (Fig. 3).

Fig. 3 - Fragment of monolithic pillar (photo by the author, ©IMTO)

In order to clarify the lay-out, function, and chronology of the structure, a short excavation campaign was carried out in March 2006 by the Italian Mission to Oman (IMTO), directed by the author in collaboration with Said Al Mashani, then Supervisor of the Archaeological Park of Khor Rori. Prior to excavation, different hypotheses had been proposed about the nature of the remains: they might represent a landing facility, an *extra moenia* temple comparable to the one discovered west of Sumhuram (Pavan, Sedov 2008), or, alternatively, a later but as yet undetermined construction.

The building

The excavated structure was built using sandstone masonry blocks, some carefully dressed, and others only roughly worked, still bearing distinct chisel marks. No traces of mortar were detected, which suggests that the walls were either constructed dry or employed a clay-rich mortar that has since completely deteriorated. The use of sandstone as a building material, instead of the limestone commonly employed at Sumhuram and in contemporary structures of the surrounding area (Pallecchi, Pavan 2011), was taken as

an immediate indication of a possible chronological discrepancy between this building and the pre-Islamic remains of the area. This interpretation was confirmed within just a few days of excavation, when the identification of a *miḥrāb* niche in the western (*qiblī*) wall clearly indicated that the structure was a mosque (Fig. 4).

Fig. 4 - General view of the mosque after the excavations (photo by the author, ©IMTO)

The structure was erected on a natural bedrock platform, which had been possibly levelled and regularised by human intervention. Excavations along the northern perimeter wall, near the north-eastern corner, brought to light a staircase with four preserved steps; the area immediately adjacent to the north-eastern corner, however, has not yet been excavated. The stairway descends toward the lagoon's water level and was most likely designed to provide access to the water required for ablution practices. No additional spaces or installations that could be associated with ablution activities were identified, apart from a few fragments of basins recovered among the collapsed ruins. Likewise, no clear traces of a minaret were documented.

According to the architectural evidence, two main constructional phases were distinguished. The analysis of the archaeological deposit, however, indicates that these phases succeeded one another within a relatively limited timeframe, suggesting that the modifications formed part of a continuous sequence of use rather than reflecting a prolonged abandonment or a subsequent large-scale reoccupation. No traces of fire or other destructive events have been observed, further supporting this interpretation.

The first constructional phase

In its first constructional phase, the building presents an irregular and somewhat atypical plan, with walls following a slightly oblique alignment, giving the structure the outline of an irregular quadrilateral (Fig. 5). This configuration was most likely conditioned by the local topography rather than by an intentional architectural design.

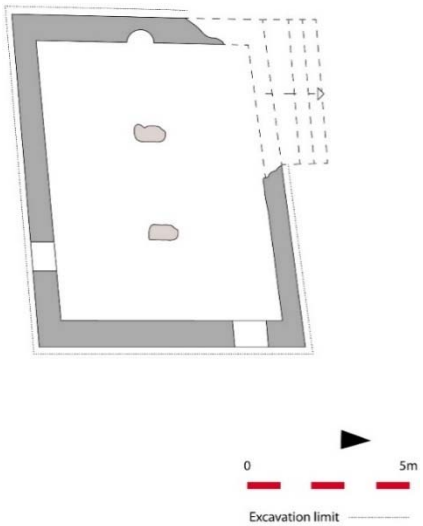

Fig. 5 - Plan of the mosque, first phase (drawing by A. Antonelli)

The walls were 0.70-0.75 m thick, with the *qiblī* wall slightly broader (about 0.90 m) to accommodate the *miḥrāb* niche within its thickness, avoiding any projection on the exterior face (Fig. 6). The *miḥrāb* was a simple semicircular niche, 0.8 m wide and 0.6 m deep, set in the centre of the inner face of the western wall. It showed no architectural framing or decorative treatment, and its orientation diverged from the exact qibla, presenting instead a marked deviation of about 30 degrees, corresponding to a precise alignment toward the west.

Despite the very poor preservation and the low height of the surviving walls, a close examination of the wall partitions nevertheless suggests the existence of two entrances, one to the south and another to the east.

The floor of the room was carefully plastered with a thick layer of white mortar, whose bright colour suggests the use of a high proportion of gypsum.

Fig. 6 - The *miḥrāb* in the *qiblī* wall (photo by the author, ©IMTO)

Along the main central axis, two sandstone slabs measuring ca 1×0.40 m, set 2.85/3.0 m apart, likely served as pillar bases for the roof, which was most probably flat. The pillars were probably monolithic rather than composed of separate elements, as suggested, if correctly interpreted, by the fragments recovered in the deposits along the sides of the mosque (see above, Fig. 3). This arrangement may have divided the interior into three aisles.

The second constructional phase

During the second constructional phase, the earlier structure was reshaped by lowering most of its walls to form a platform, within which new parallel walls were inserted (Fig. 7).

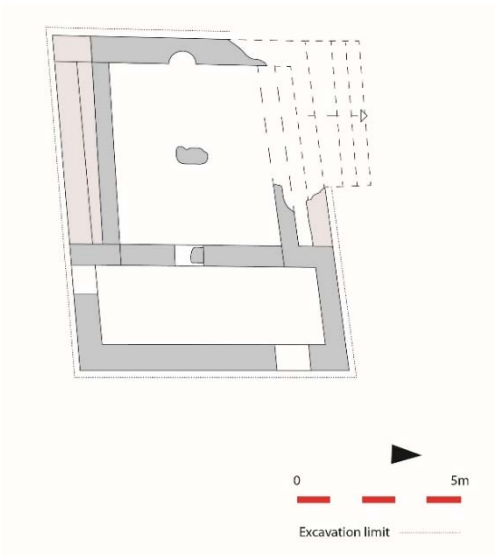

Fig. 7 - Plan of the mosque, second phase (drawing by A. Antonelli)

Fig. 8 - Pillar base at the centre of the prayer room (photo by the author, ©IMTO)

Only the *qiblī* wall remained unchanged. As a result, the mosque acquired a new layout consisting of two main parts: a prayer hall, irregularly square in plan and measuring 4.5-4.8×5.3-5.6 m, and an elongated gallery/courtyard to the east, measuring 2.25-2.5×8.6 m and oriented along a north-south axis, which corresponded to the easternmost aisle of the earlier structure. Access to the prayer hall was through this space, aligned with the *miḥrāb*. Of the pillar bases from the earlier structure, the one closest to the *miḥrāb* was left in place and re-used as the central element of the new prayer room (Fig. 8). The eastern base, by contrast, was partly covered by the north-south wall that defined the smaller prayer hall and was partially reused as the threshold giving access to the room. Given the limited size of the space, the presence of a single pillar was sufficient to support the roof and to articulate the interior without requiring additional supports.

Pottery and Small Finds

Inside the building, only very shallow deposits and a limited amount of archaeological material were preserved, as the low standing walls were insufficient to protect the area from erosion and deflation. The stratigraphic sequence consists solely of a thin Aeolian layer (SURF) overlying a moderately compact loam deposit, mixed with small- and medium-sized stones, with an overall thickness of about 0.5 m (SU1).

The presence of a fireplace was suggested by thin ash lenses and a few flecks of charcoal identified in the filling of the gallery, just a few centimetres above the well-plastered floor. A small quantity of animal bones, together with several marine shells, was recovered in association with the fireplace, possibly indicating the consumption of food within the mosque.[4] It is uncertain, however, whether the fireplace might relate to the second phase of the building or rather to a later reuse of the ruins as a shelter.

Few pottery sherds, which are mostly barely identifiable walls, were unearthed together with the rim and part of the globular body of a cooking pot made in a Shell ware (Fig. 9). This fabric is a typical marker of the pottery from Dhofar since the so-called Local Iron Age (Zarins 1997, 664; Pavan 2017, 29-30) but it became widespread during the whole Islamic period (Fusaro 2019, 132), being used until today for the very limited local production (Fusaro 2020).

Fig. 9 - Rim of cooking pot in shell-tempered ware (photo by the author, ©IMTO)

Moreover, one of these pottery sherds presents an extremely characteristic decoration comprising impressed motifs with the shape of rice grains which identify a well-known category of pottery spread in southern Oman (Newton, Zarins 2017, 42, 46-47).

During surface cleaning, alongside several pillar fragments with rectangular shafts (including one with a rectangular capital), a squat pillar-shaped incense burner, roughly chiselled, was uncovered (Inv. No. S2, Fig. 10). With the exception of its base, all surfaces are completely blackened, a condition attributable to prolonged exposure to atmospheric agents rather than to ancient burning, as already noted for the construction blocks. The burner, carved in limestone, rests on a base forming a torus-like moulding and bears a second protruding element at the top (h. 4.5 cm; th. 1 cm) that functions as a rim and delimits the upper recess (depth 2.5 cm). Both the rim surface and the recess are flat and only roughly finished. A large oblique fracture on the upper part removed much of the rim and part of the stem. This incense burner is

[4] Such a practice is also reported at Al Baleed, where religious buildings may have served as hostels or places of private worship (Newton, Zarins 2017, 73-74).

remarkable for several reasons: not only does it reproduce the form of an architectural element, but specifically that of a column with circular section – an extremely rare feature in southern Oman, where columns are usually rectangular or octagonal in plan.[5]

A second object (Inv. No. S1, Fig. 11) was recovered during the removal of SU1 inside the gallery leading to the prayer hall (second construction phase). It is a rectangular sandstone slab bearing small circular depressions arranged on one of its main faces in a 7×3 grid. Due to a corner fracture, one of the long sides preserves only four depressions, while one of the short sides has just two. The slab can be identified as a gaming board (*mancala*), frequently encountered in medieval archaeological contexts in Dhofar and representing valuable evidence of recreational practices in that period. Several comparisons can be found in similar objects discovered at Al Baleed, Wubar[6] and in the latest deposits of Sumhuram (Pavan 2023, 125, fig. 11). While most of them are currently exhibited or stored the Museum of the Frankincense Land, Salalah, Sultanate of Oman, one was re-employed as construction block in the masonry of the citadel of Al Baleed and it is still *in situ*. As evidenced also by the occurrence of this kind of findings along the seashore of Salalah (Charpentier *et al.* 2014), these board games are generally associated with the Ottoman period.

Fig. 10 - The pillar-shaped incense burner S2 (photo by the author, ©IMTO)

Fig. 11 - The board game/*mancala* S1 (photo by the author, ©IMTO)

Conclusions

The discovery and excavation of the mosque at Khor Rori represents a valuable addition to the Islamic-period record of coastal Dhofar, a region where, unlike the earlier phases of occupation, now increasingly understood in terms of settlement dynamics, coastal - hinterland interactions, and relations between local groups and external populations (Lischi 2023), evidence for the medieval period remains sparse and fragmentary. At present, the available data are insufficient to clarify when Islamic occupation began or how it developed in the region.[7] As a result, the chronology of most of the settlements remains uncertain, making

[5] See for example the columns in the Great Mosque of Al Baleed (Costa 1979).

[6] Some board games (ID0264 and ID0263) are currently exhibited at the Museum of the Frankincense Land, Salalah, Sultanate of Oman.

[7] Although numerous medieval sites were recorded during the Transarabia Survey (1990-1995; Zarins 2001) and later during the Dhofar Survey led by J. Zarins and L.S. Newton (Zarins 2007; Newton, Zarins 2010; Newton, Zarins 2017, 42-52), only a limited number have been investigated through archaeological excavation (Albright 1982; Avanzini *et al*. 2001; Rougeulle 2008; Agostini 2013). See also the more recent survey along the Dhofari coast, made by the team of the Italian Archaeological Mission at Al Baleed, which specifically focused on Islamic sites (Giunta, Pavan 2022, 5-10; Pavan 2024).

it difficult to reconstruct the distribution and occupational dynamics of Dhofar from the decline of the caravan kingdoms, marked locally by the abandonment of Sumhuram in the 5th century AD (Buffa 2019, 247-273; Pavan 2023), throughout the Islamic period. The chronological framework of medieval settlement in coastal Dhofar remains far from clear. Even the foundation date of Al Baleed, the largest site in the region and one of the most important in Southern Arabia during the medieval period, is still uncertain despite numerous, though not continuous, excavations over the past seventy years (Giunta 2021).

Similarly, the mosque at Khor Rori cannot yet be securely dated: the excavated materials do not allow attribution to a specific chronological range, and stratigraphic evidence indicates that the two construction phases followed one another within a short span of time.

Closely connected to this chronological uncertainty is the question of whether the mosque functioned as an isolated building or was related to a nearby settlement. The most immediate hypothesis is a connection with the site of Inqitat/al-Hamr al-Sharqiya (see above and Fig. 1); however, the mosque lies about 2 km away from the settlement, a distance that makes such an association problematic. Within Inqitat itself, no mosque has so far been identified – only a "house with patio," a "palace," and some "stores" have been excavated – though only a small portion of the site has been investigated (see the plan in Avanzini *et al.* 2001, 51, fig. 45). Its location along the lagoon and near a freshwater spring could suggest a deliberate choice, providing easier access to water for ablutions.

Another possibility is a link with the Islamic occupation of Sumhuram, which material evidence broadly places between the 9th and the 12th-13th century, though the later horizon (12th-13th century) appears more plausible (Pavan 2023). Yet this occupation seems scattered and partial, lacking the architectural structures documented at Inqitat, and the ceramic assemblages from the two sites display clear differences. Taken together, these elements suggest that the two occupations reflect distinct modes of territorial use and likely belong to different chronological phases, rather than representing a single, continuous horizon.

There is, however, a third hypothesis, connected with the presence in Dhofar of shrines and distinctive buildings associated with figures of particular religious prestige.[8] As in the case of some religious buildings located in the surroundings of the town of Al Baleed, it is possible that the mosque in the area of Khor Rori was a holy enclave which could provide protection in case of problems among tribes or a place where people could take an oath in case of agreements.

An alternative explanation is that the mosque functioned as a place of prayer for people passing through the area, its location recalling the practice – attested in different periods – of establishing simple open-air spaces for worship in strategic or accessible spots. The presence of a modern *muṣalla* on the rocky spur behind the mosque, documented in July 2025, may offer a useful parallel for such a use of the site.

As such, it could have represented a welcoming sign from the communities living in the area, also considering that accessing the holy places possibly present inside the settlements, Inqitat and Sumhuram, would have not been easy, given both were walled and, the first, in an elevated position. It is interesting to note that this interpretation would imply some (indeed speculative) sort of continuity in an attitude towards the foreigners already mirrored in the construction of *extra moenia* temple along the lagoon (Pavan, Sedov 2008), as well as in the construction of a water supply accessible from outside the city walls at the time of Sumhuram (Degli Esposti, Pavan 2020).

Acknowledgements

[8] For a discussion about role and functions of *mashayikh* and connected places see Newton 2010, 333.

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