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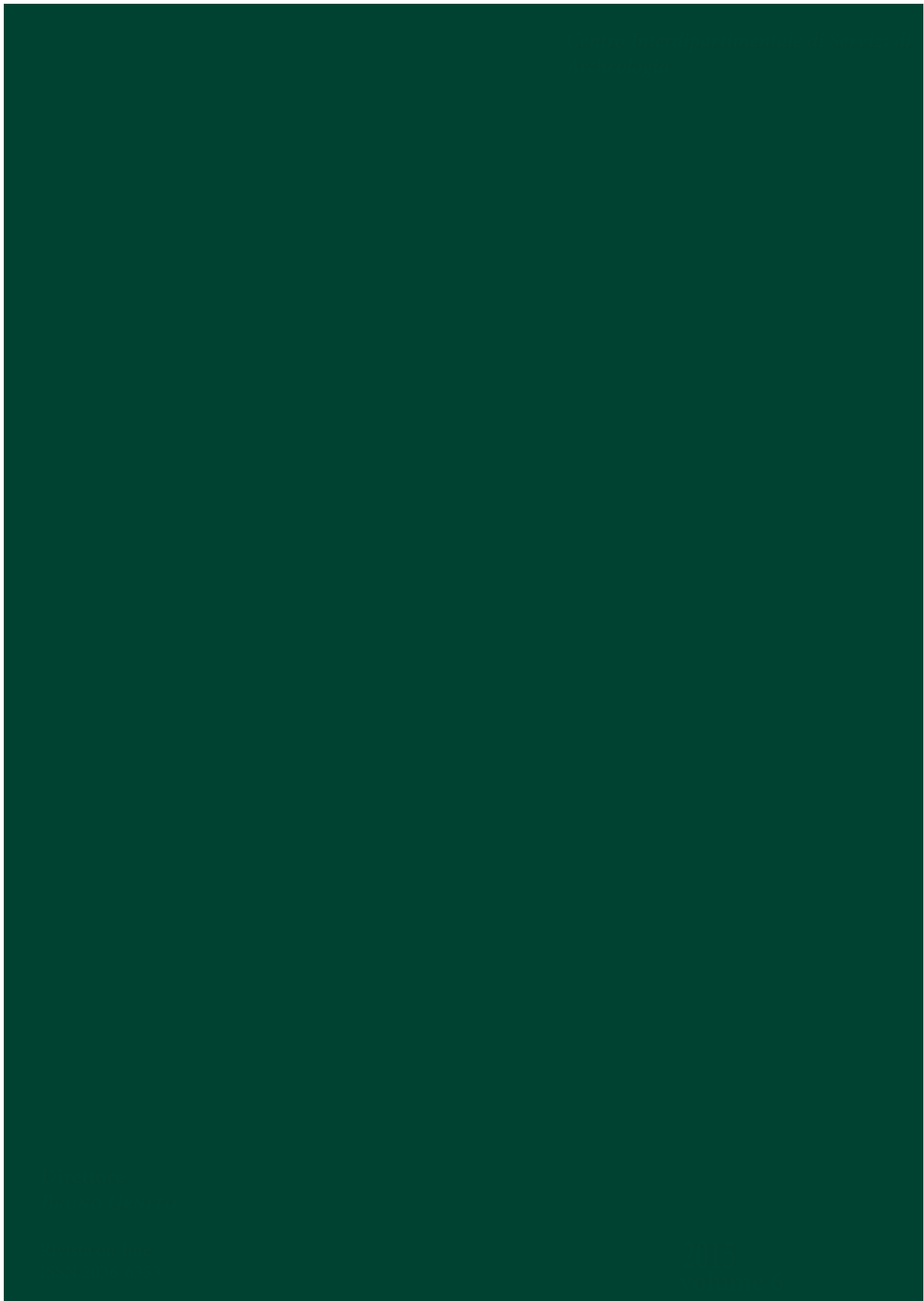


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# The site of Zafār/al-Balīd (Sultanate of Oman)

## Archaeological investigations between past and present

Proceedings of the round table held at Naples, Università L'Orientale, on June 18<sup>th</sup> 2021

Edited by A. D'Andrea, R. Giunta, A. Pavan, R. Valentini



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## SUMMARY

<i>Foreword by Alessandro Garbellini</i>	V
<i>Introduction</i>	1
<i>Andrea D'Andrea</i> , THE URBAN SPACE BETWEEN REPORTS AND EXCAVATIONS	3
<i>Roberta Giunta</i> , ZAFĀR/AL-BALĪD: DATING ISSUES AND MAIN EVIDENCE BETWEEN THE 11 <sup>TH</sup> -14 <sup>TH</sup> CENTURIES	15
<i>Alexia Pavan</i> , A SENTINEL ON THE INDIAN OCEAN: THE CITADEL OF AL-BALĪD (EXCAVATIONS 2016-2020)	23
<i>Rosario Valentini</i> , PHOTOGRAMMETRIC AND TOPOGRAPHIC INVESTIGATIONS AT AL-BALĪD	47
<i>Carlotta Passaro</i> , ATLAS OF THE WALLS: FIRST RESULTS FROM THE STUDY OF THE CITADEL	53
<i>Alessandro Ghidoni</i> , SHIP TIMBER RECYCLING IN AL-BALĪD	67
<i>Agnese Fusaro</i> , THE HISTORY AS TOLD BY THE POTTERY: AN INSIGHT INTO THE LAST OCCUPATION PHASE OF THE CITADEL OF AL-BALĪD	81
<i>Chiara Visconti</i> , CHINESE-STYLE CERAMIC UNEARTHED AT ZAFĀR/AL-BALĪD: A GENERAL OVERVIEW OF THE CORPUS AND A FOCUS ON THE LATEST PERIOD	101
<i>Arturo Annucci</i> , THE COINAGE OF ZAFĀR/AL-BALĪD IN THE MONETARY CONTEXT OF DHOFAR	117
<i>Alexia Pavan, Ali Al Kathiri</i> , THE OBJECTS FROM AL-BALĪD AT THE MUSEUM OF THE FRANKINCENSE LAND, ṢALĀLAH, SULTANATE OF OMAN	127
<i>Amanda Antonelli</i> , DHOFAR CEMETERY AREAS: THE STATE OF RESEARCH AND NEW INVESTIGATION TASKS	137
ANNEX	149
VISITS, ARCHAEOLOGICAL SURVEYS AND EXCAVATIONS IN ZAFĀR/AL-BALĪD (1834-2019)	
REFERENCES	153
GENERAL INDEX	165



## FOREWORD

I welcome with great pleasure this volume on the Italian researches over al-Balīd site published by the University of Naples “L’Orientale”. This is a further sign of how actual, dynamic and tangible is the collaboration between Italy and Oman in the archaeological field. Since the 1970s, the contribution of the Italian archaeological missions to the development of the relationship between the two countries has been essential. Thanks to the enthusiasm of the Omani authorities in promoting studies and research on the history of the Sultanate, Italian universities have always found responsive and supporting stakeholders, willing to facilitate excavations, analysis and in-depth activities by the archaeologists. Italian universities have always shared and agreed the goals and the features of their research with the Omani authorities, thus helping build a solid relationship of collaboration and trust, which has turned into a constant dialogue, joint activities and publications. These collaborations have also paved the way to a cooperation in the cultural and restoration sectors which allowed to share Italian conservation techniques with the Sultanate.

As part of the Vision 2040, the economic diversification strategy, the Omani authorities are focusing on the development of the tourism sector thanks to the appeal of the great historical heritage of Oman. The collaboration with Italy also supported the inclusion of several Omani sites studies by Italian scholars in the UNESCO World Heritage List. This is a great recognition of Italy and its scholars.

In this framework, the activity of “L’Orientale” in Dhofar is extremely important. This part of Oman is a key area for studies on the development of coastal civilizations in Southern Arabia. The research allows us to understand the relations that the Dhofar had with the rest of the region, from the African coasts the shores of Asia. This highlights the roots of the openness of the Sultanate to the world, which still today makes the maritime dimension a pillar of Oman’s development. The interest of the Omani Authorities for Dhofar – the birthplace of late Sultan Qaboos bin Said – and its potential for cultural tourism thanks to the presence of important UNESCO sites, makes the continuation of the studies on al-Balīd as promising as ever.

Since 2021, the Mission led by Prof. Roberta Giunta has received funds from the Ministry of Foreign Affairs and International Cooperation of Italy. Italy has been supporting the work of Italian archaeologists in the Sultanate for over 40 years, thus gaining the appreciation of the Omani authorities at the highest level. Whilst recalling with great pleasure my participation to the roundtable of June 2021, I wish the mission full success in its research, which will be able to clarify still unknown aspects of the long history of Omani civilization.

A special thanks goes to the Ministry of Heritage and Tourism of the Sultanate of Oman, a strong partner of Italy and which has been supporting this new project. With the same spirit, I would like to express my gratitude to Professor Roberta Giunta and the co-director Dr. Andrea D’Andrea, as well as their working group, and Dr. Alexia Pavan in particular, for their dedication and constant collaboration with the Embassy of Italy in Muscat.

Alessandro Garbellini  
Deputy Head of Mission Embassy of Italy in Muscat





## INTRODUCTION

This volume collects the contributions presented at the remote round table “The site of *Zafār/al-Balīd* (Sultanate of Oman). Archaeological investigations between past and present”, held at the University of Naples L’Orientale on 18<sup>th</sup> June 2021. The choice to organise a workshop and not a traditional conference arose from the need to create an opportunity for exchange and comparison among the scholars and experts who have worked in different fields at al-Balīd during recent years. This opportunity for discussion was also necessary given the peculiar historical moment: in 2020 the Office of the Adviser to His Majesty the Sultan for Cultural Affairs, under whose aegis the work of J. Zarins and L.S. Newton (2015-2012) and subsequently of A. Pavan (2016-2020) had been carried out, was closed and the activities passed under the Ministry of Heritage and Tourism of the Sultanate of Oman. Moreover, the pandemic crisis of 2020 had caused a forced and prolonged interruption of fieldwork, requiring a change in the strategy of the archaeological activities conducted since 2021 by the mission of the University of Naples “L’Orientale”, co-directed by Roberta Giunta and Andrea D’Andrea.

It was therefore a priority to organise a meeting from which, on the one hand, the state of the art about the current knowledge of the site could emerge and, on the other hand, new research trajectories could be outlined. The last few years of work at al-Balīd have been characterised by a multidisciplinary approach, which, alongside the more traditional methods of archaeological investigation, first and foremost the stratigraphic excavation, has included the collaboration of experts from various sectors, from geo-archaeological investigations aimed at the reconstruction of the palaeo-environment, to the study of ceramics from both the Islamic Lands and East Asia, numismatics and wooden elements reused in architecture and, finally, the 3D survey of the citadel.

Despite the work that has been carried out, there is still much to be understood about the foundation of the city, its urban layout with its transformations, its relationship with the surrounding area and the ethnic components that are presumed to have inhabited it.

Only a holistic and interdisciplinary approach will allow us to try to understand many of the still unclear issues of the settlement’s development and therefore archaeological field research must necessarily be accompanied by a recovery and a re-reading of the available written tradition that may record different sources, Chinese, Arabic and also European.

The geographic location of the site represents a privileged perspective to outline a model of an Islamic city in southern Arabia at least for the middle and late Islamic period. In fact, al-Balīd is the only medieval city along the Indian Ocean coast where excavations can be carried out, given the political instability in Yemen and the lack of evidence along the eastern part of the coast, with the exception of Qalhāt, which was however abandoned in the 16<sup>th</sup> century.

The proceedings of this conference represent a starting point for a new season of investigations in al-Balīd including the contribution that scholars from different research perspectives can make to the understanding of life of this important crossroad in the East-West trade routes. The main purpose was to produce a “handbook” that could be used by those working on-field, also to guide necessary subsequent studies on the ancient landscape and on the materials. However, we are committed to continuing our investigations through activities aimed at understanding the urban development of the site, but also delineating the cultural and natural environment in which the site was able to develop and prosper for many centuries.

Our heartfelt thanks go to the authors who contributed with their articles and research to this volume. The resumption of investigations in al-Balīd can only be achieved by bringing together a young and old group of scholars who are experts in different fields and moved by a spirit of interdisciplinary collaboration.

Works at al-Balīd have been possible thanks to the cooperation with the Ministry of Heritage and Tourism and we would like to thank the Minister, HE Salim bin Mohammed Al Mahrouqi, Dr Sultan Al Bakri, Director General for Archaeology and Dr Ali Al Mahrouqi, Director of Surveys and Archaeological

Excavations in Muscat for their support to the resumption of activities at the site.

In Ṣalālah Mr Khaled Abdullah Al Abri, Director General of Heritage and Tourism in the Governorate of Dhofar, Mr Ali Al Kathiri, Director of the Land of Frankincense Sites Department, and Mr Said al Amri, Supervisor of the site of al-Balīd, are heartfelt thanked for the strict and fruitful collaboration on the field, in the logistic and for their continuous support.

Warda Al Shahri, Salem Ghassani and Salem Tabook did a great job in the organization of the store and the conservation of the findings.

Warm and due thanks must also be directed to HE Abdulaziz bin Mohammed Al Rowas, former Adviser to the former HM the Sultan for Cultural Affairs who first believed in the potential of the site and initiated the development of the works at al-Balīd.

The efforts of surveyors, restorers, technicians and geologists have to be mentioned as well, in particular we are grateful to M. Cremaschi, S. Laurenza, A. Massa, A. Tilia, A. Zerboni for their contribution to the round table.

Finally, we really would address a heartfelt thanks to the Italian Embassy in Muscat in the person of HE Federica Favi, Italian Ambassador in the Sultanate and Dr Alessandro Garbellini, Deputy Head of Mission, whose constant support has been essential for an easier resumption of the activities at the site and the Italian Ministry of Foreign Affairs and International Cooperation for the economic and political support provided to the mission.

The editors

## A SENTINEL ON THE INDIAN OCEAN: THE CITADEL OF AL-BALĪD (EXCAVATIONS 2016-2020)

*Alexia Pavan*, former Director of the excavations at the citadel of al-Balīd (2016-2020)

The massive profile of the citadel, standing like a sentinel against the city wall and overlooking the Indian Ocean as well as the territories of the interior, has always been one of the landmarks of the urban landscape of the town of al-Balīd, the ancient city of Zafār (Figs. 1, 2).<sup>1</sup>

A large building which most possibly corresponds to the ruins of the structure located in the north-western corner of the site (Fig. 3) and which has been identified as the citadel of the town, started to be mentioned in the chronicles of merchants and geographers since the 13<sup>th</sup> century. Later, from the half of 1800, the structure was quoted in the records of captains, lieutenants and members on board of the East India Company ships, as well as in the accounts of travellers interested in the explorations of the Arabian coast, looking for the places mentioned in the classical sources.<sup>2</sup>

Differently defined in the archaeological reports as a palace (Phillips 1972; Albright 1982; Costa 1981) or a citadel (White 1999, 2000; Peshkov 2001; Peshkov, Voyakin 2001; Jansen 2015) since the excavations of J. Zarins and L.S. Newton (Zarins, Newton 2012; Newton, Zarins 2017) the building has been conventionally mentioned as *ḥuṣn* (“fortress”), name which has been kept, together with the synonym of citadel, during the most recent excavations carried out by the author.

The earliest interest for the ruins of the citadel of al-Balīd dates back to 1932, during the reign of His Majesty Sa‘id bin Taimoor when the Sultan decided to carry out some investigations in the building. During the works, part of the southern wall and the tower located in the southeast corner were exposed (Albright 1982, 59). We do not have any report or image related to these activities, but a number of pictures taken by B. Thomas in 1929 and later published by W.D. Peyton (1983, 75), provide an idea of the city of al-Balīd in the first half of the 20<sup>th</sup> century. If a number of columns were still standing in the Grand Mosque, the citadel, distinguishable in the background of the photos, was just a huge heap of collapsed stones without any visible standing structure.

The first archaeological operations at the citadel were performed by the American Foundation for the Study of Man (AFSM) between 1952 and 1953 (Fig. 4) and they were mainly focused on the south-western corner of the building (Phillips 1972, 139-143; Albright 1982, 60). A large room, interpreted by Albright – at that time director on the field of the AFSM –, as the last private residence of the local ruler, was excavated but, despite an exploratory sounding 11 m deep, no stratigraphy was identified. The materials found during the works were only barely mentioned in the report with a generic reference to “China, glazed and crude ware” and to “glass objects” (Albright 1982, 60).

From 1977 to 1981 P.M. Costa with a team of archaeologists and different specialists including the epigraphist G. Oman and the historian R. Smith, worked at the site, under the egis of the Ministry of National Heritage and Culture of the Sultanate of Oman. The palace, as it is referred in the report, was not included in the excavation programme, but the methodology,<sup>3</sup> the results achieved during the works and the historical reconstruction put forward in the paper published at the end of the works (Costa 1979), are still fundamental for the knowledge of the town and represent the starting point for any further speculation.

A multidisciplinary work was carried out between 1995 and 2001 by the German team of Aachen University, under the scientific direction of M. Jansen.<sup>4</sup> Although the main goal of these works was the clearing of the debris in order to prepare the site to be inserted into an archaeological park<sup>5</sup>, important achievements were reached regarding the general comprehension of the archaeological structures of the town and their chronology.

As far as the citadel is concerned, investigations were carried out in different sectors (Fig. 5): the north-western corner and its connection with the northern city wall – the so-called Junction Wall –, the southern side with the main gate, and finally some rooms, north-south oriented, located north to the gate complex (Jansen 2015, 161-208).

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<sup>1</sup> Unless otherwise specified the photos have been made by the author.

<sup>2</sup> For an overview of the sources, see D’Andrea in this volume.

<sup>3</sup> It is owed to P.M. Costa the creation of the topographic grid of 50×50 m which divides the whole site in squares and represents the referenced system in use still today.

<sup>4</sup> For the final report comprehensive of the previous preliminary works, see Jansen 2015.

<sup>5</sup> The park was inaugurated in 2000, when al-Balīd was listed among the World Heritage sites by UNESCO together with Sumhuram, Wubār and the Natural Reserve of Wādī Dawka under the collective name of “The Land of Frankincense sites”.

Five main “Building periods” have been tentatively individuated after the excavations of the north-west corner and they have been dated, in terms of absolute chronology, with C-14 dates obtained from wood samples, ranging from the 10<sup>th</sup> to the 17<sup>th</sup> century (Jansen 2015, 168-169, 354-357).<sup>6</sup> Systematic investigations inside the citadel began in 2006, under the direction of J. Zarins, later joined by L.S. Newton within the frame of works granted by the Office of the Adviser to His Majesty the Sultan for Cultural Affairs.<sup>7</sup>

The works of Zarins and Newton at the citadel terminated in 2008 (Figs. 6, 7) while, at the site, they stopped four years later. During this period a number of results were achieved about the general comprehension of the layout of the town of al-Balīd, thanks to the excavation of significant buildings and of the whole southern side including the area of the harbour (Zarins 2007; Zarins, Newton 2012; Newton, Zarins 2014; 2017). As far as the citadel is concerned, the works were focused on the four sides of the building which were almost completely cleared out and on the south gate complex which was excavated together with the monumental staircase. Moreover, some deep soundings were conducted in the interior of the building, and in the north-eastern portion. Contemporary, also the archaeological excavation of the area located immediately north of the building was resumed. Here the remains, only partially brought to light under the former direction of M. Jansen, identified a possible washing area with drains (Newton, Zarins 2017, 67) whose investigation continued during the recent excavations conducted between 2019 and 2020.

#### WORKS 2016-2020: AIMS AND METHODOLOGY

The importance and the uniqueness of such a building encouraged the Office of the Adviser to His Majesty the Sultan for Cultural Affairs,<sup>8</sup> to inaugurate a multidisciplinary project exclusively focused on the citadel. The project was started in 2016 and it was suspended in July 2020 because of the arise of the pandemic. Beside the stratigraphical investigations and the study of the masonries, the project included a comprehensive analysis of the materials such as pottery – either local and imported –, coins and timbers which have been discussed and published in different papers (Pavan *et alii* 2018; 2020; Pavan, Visconti 2020; Fusaro 2019, 2020a), in the PhD thesis of A. Ghidoni (2021) and they will be summarized in some of the contributions in this volume.

Goals of the works at the citadel were the comprehension of the architectural development of the building and the identification of its different constructional and occupational phases with the aim to obtain a chronological paradigm to apply to the excavated buildings, mainly located in the western portion of the town.

The project, at the beginning, was even more ambitious because it would have included the consolidation and restoration of the masonries in order to allow the visit of the complex through a path illustrating the history of the building and the modifications which occurred over time. Unfortunately, soon it became clear that such a kind of musealization and enhancement of the ruins was a difficulty feasible task because of the compromised state of the preservation of the masonries and a number of structural issues related to the building itself. Works, moreover, were complicated and went into a prolonged stall because of the cyclonic storm Mekonu, which violently stroke the coast of Dhofar in May 2018, causing severe damages in the whole region and mainly in the area of Ṣalālah.

The site of al-Balīd was badly affected and the most critical issues were located at the citadel (Figs. 8, 9): large parts of the curtain wall were washed away by the violence of the storm and the pressure of the water rain accumulated on the top of the building caused a number of caves which made difficult the continuation of the excavations and obliged to perform a proper process of securing.

A number of difficulties were, however, faced also during the investigations. Most of the standing masonry structures revealed a dangerous weakness because of the infiltrations of water due to the lack of

<sup>6</sup> These dates have been recently confirmed by recent further analysis carried out within the frame of the PhD dissertation of A. Ghidoni on the ship timbers recovered at the site, discussed in 2021 at the University of Exeter. It has however to be mentioned that the timbers of al-Balīd were found in secondary deposition embedded in the masonry of the building or included in the intentional filling of some of the rooms and so far represent a chronological issue which could be addressed only at the light of further excavations.

<sup>7</sup> The Office of the Adviser to His Majesty the Sultan for Cultural Affairs, headed by His Excellency Abdulaziz Al Rowas, has been encompassed since 2020 in the Ministry of Heritage and Tourism of the Sultanate of Oman which continues in supporting the works at the site now under the direction of R. Giunta, University of Naples L'Orientale.

<sup>8</sup> The author is in debt with many persons involved in the works carried out at al-Balīd between 2016 and 2020. His Excellency Abdulaziz Al Rowas was the first who believed in the project and called me to work permanently as a consultant for the Diwan of Royal Court. Works would not have been possible without the collaboration of Mr. Ganem Al Shanfari for whom al-Balīd and the whole Dhofar have no secrets and the kind willingness of Ali Al Kathiri, former Director of the Museum of the Land of Frankincense in Ṣalālah and since 2020 Director of the Land of Frankincense Sites Department. Dr. Said Al Salmi has been a point of reference during the years in Oman, together with Hassan Al Jabri and Muati Al Muati. To Mohamed Al Jahfali, Said Al Amri and Abdulrahman Al Mashani goes my gratitude for the collaboration on the field.

coverings and showed structural issues mainly related to the construction technique itself, which employs wooden elements which were, in many cases, rotten or in a bad state of preservation (Borgese *et alii* 2019). Moreover, the discovery of lower floors with preserved ceilings weighed by the natural deposit accumulated overhead, made necessary to shore up some of the rooms in order to go ahead with the excavations (Fig. 10).

Having the ruins a shape similar to a tell, the investigations were carried out starting both from the top of the mound, with the aim of exposing the sequence of the building occupation according to an horizontal stratigraphy, and from the sides, with the goal of understanding the sequence of the interventions carried out over the time at the curtain walls of the citadel according to a vertical stratigraphy.

A quantity of residual material was noticed already in the past, during the works carried out by M. Jansen (2015, 167). Some of the investigated archaeological contexts are, indeed, definitely disturbed, but this mainly happens because of the presence of modern intrusions evidenced by the findings of bullets or modern glasses. Structures or pits have been found filled of modern materials (metals and plastic) due to a continuous frequentation of the ruins in recent times. Pieces of lithic, to be considered intrusive, have been discovered as well in a number of late contexts excavated below the surface or within intentional fillings.<sup>9</sup> The mixing up of the materials in numerous upper contexts could be explained by the fact that AFMS did not discard the debris resulting of the soundings, but just spread them on the top of the building.

Furthermore, also the action of stone robbers has to be taken into account: the use of the original masonry blocks and, in many cases, of columns of the ancient town as building material for the construction of new buildings in the city of Şalālah continued until 1970 when the area of the archaeological site was finally fenced by will of His Majesty Sultan Qaboos Bin Said.

Before the works started in 2016 the perimeter of the building was basically defined and the curtain wall consolidated for most of their length during the activities carried out by M. Jansen and, later, by J. Zarins and L.S. Newton in collaboration with the University of Pisa, Department of Structural Engineering (Sassu *et alii*. 2017). The interior remained, instead, only very partially excavated and there was any idea about the spatial distribution of the rooms (see figs. 6, 7).

As far as the mapping of the building is concerned, the reference system employed was the grid with squares of 50×50 m covering the whole site, planned and managed by P.M. Costa and his team during the works carried out from 1977 to 1981. In order to obtain a more accurate definition of the archaeological contexts within the citadel, a further topographical net of 5×5 m was created by the surveyor B. Isenberger during the works of J. Zarins and L.S. Newton and it was later revised in 2018 by A. Massa through the updating of the documentation and the addition of an alphanumeric version of the grid (Fig. 11).

A digital replica of the citadel has been obtained through the use of 3D technologies (laser scanner and drone), combined to the traditional topographical grid realized with a total station. This allowed to obtain a model of the elevations of the four sides of the building (Fig. 12) which has been used for multiple purposes such as to define the different construction phases, highlighting in the meantime the different typology of masonry, and to document and show the integrations derived from the consolidation and restoration works carried out during the last years. Moreover, the use of the laser scanner allowed to develop a 3D model of a portion of the second storey of the citadel (Figs. 13, 14) which was exclusively digitally documented but not investigated for safety reasons. A DEM model of the citadel was moreover realized by A. Tilia in 2019.

133 rooms have been individuated within the citadel since 2016 and they were numbered as A1-A133. The amount includes also some of the rooms previously excavated, which have been subjects to interventions, investigations or cleaning during the 2016-2020 works. 26 rooms have been moreover investigated outside the northern curtain wall of the citadel – area NH (North Huṣn) –, where drains, plastered rooms, channels and a stepped well are located. These rooms have been labelled as NH1-NH26.

The methodology employed during the investigations was based on Stratigraphic Units (SU) and Masonry Stratigraphic Units (MSU, M henceforth for abbreviation). Cards including data related to definition, position, relations, components, measures, description have been created following and adapting the regulations established by the Italian *Istituto Centrale per il Catalogo e la Documentazione*. Specific cards have been elaborated for the different typologies of findings: objects, raw materials and samples (A. Pavan), pottery (A. Fusaro, A. Pavan, C. Visconti), coins (R. Giunta, A. Annucci) and ship timbers (A. Ghidoni). In collaboration with C. Passaro, a card was moreover created specifically for the walls, in order to create an atlas

<sup>9</sup> Lithics from Bronze, Iron Age and, possibly, from Neolithic, collected during the excavations at al-Balīd have been interpreted as evidence of a long frequentation of the *chor* and of the area (Jansen 2015, 115; Newton, Zarins 2017, 24).

of the masonry (Pavan *et alii* 2019). The card includes fields such as building element and binding, beside the description, the location, the technique and the type of masonry.<sup>10</sup>

#### THE ARCHITECTURAL LAY-OUT AND THE SPACE DISTRIBUTION

According to the results of the preliminary deep soundings carried out by Newton and Zarins (2017, 40) in the town, the citadel, as the whole town of al-Balīd, was built on the bedrock and on a whitish beach sand sterile deposit where it is evidenced the sporadic occurrence of black organic remains and *Terebralia palustris* shells. This level, during the most recent excavations, was reached in the southern premise A67 (Fig. 15, SU274, below SU271 floor), in room A57 (Fig. 16) – belonging to the complex of the so-called stables (SU110), and in some of the rooms located in the northern area such as, for example in room NH1, SU375.

As far as the general lay-out is concerned, the citadel is a massive building, approximately squared in plan, with sides measuring 69 m (S), 63 m (W), 56 m (N) and 60 m (E). The highest elevation was reached at 12.87 m asl, on the top of the very late fragmentary plastered reservoir M243, standing on a very thick Aeolian deposit in room A39. Because of the elevations of the different floors identified, the building was supposed to develop on three or four storeys.

The presence of a central court is suggested by the arrangement of the ruins itself – with a flat natural depression at the centre —and it has been confirmed, at least for the late occupation phases, by the recent excavations which brought to light a number of post-holes which cut the floor SU227, at an elevation which varies from 7.90 m to 8.22 m asl. The most possible function of the holes was to support wooden poles for creating shadow into the open space of the court by means of tents (Fig. 17).

The local folklore (Jansen 2015, 163) mentions the existence, at the centre of the building, of a court with a well which seems to be still remembered by the eldest habitants of Ṣalālah. This memory is however to connect, most possibly, to the investigations of the AFSM in the Fifties, when a deep sounding was excavated and a well, lined with masonry blocks, discovered (Albright 1982, 61). Such a layout, a quadrangular building with sides measuring about 50 m, provided of a central open space surrounded by rooms has enjoyed a great fortune in Dhofar: it continued, in fact, to be replicated until recent times in the region within the modern forts used as residences for the governors built in some of the towns located along the coast such as Ṭāqa, Mirbāt and Ṣadh during the 19<sup>th</sup> and 20<sup>th</sup> century (Groves 2010).

At al-Balīd the way to access to the interior of the citadel changed over the time. Two formal gates, which were not coeval, were individuated during the excavations. The earlier was located in the western side and it developed through a couple of monumental portals named as M111 and M115, separated by room A44, which was originally a wider space including room A48 and room A44, later reduced to a kind of corridor, after the construction of wall M114 (Figs. 18, 19). The masonry technique employed horizontal and parallel courses where the blocks, of regular and wide size, were organised according to horizontal beds, generally associated with masonry elements with homogenous dimensions, especially for height. Binding in form of mortar is often present, while sporadic is the presence of wooden elements between the blocks. Both the portals M111 and M115 were characterized by the presence of two rows of ten beams each, made of local hardwood. The massive dimensions of the portals and the discovery, during the 2019 consolidation works, of a stone slab with a ring for horses, allow proposing that it was possible to enter into the citadel through this western gate by mounting a horse. It could not be excluded that there was also a specular gate located along the eastern side of the building: the two walls M178 and M164 were apparently built with the aim of flanking a possible entrance through room A58 (Fig. 21). Wall M2 was a later addition which closed the room on its western side. Most important, entrance through premise A58 would be symmetrical to the portals on the western side. The formal gate in use during the following occupational phases is the one which, still nowadays, gives access to the building. Located in the middle of the southern side, the gate we see nowadays is actually the result of a number of re-arrangements, which are to date very difficult to be distinguished and dated. The entrance passageway was articulated according to different segments with bent angles which possibly, in the original plan, corresponded to the location of two-shutter doors and represented a sequence of barriers towards the interior of the building (Fig. 22).

The first room was A132 which today appears guarded by the circular tower A66, built through compartments M188 and M189, one leaning against the other. A door was used by the soldiers to enter into this tower and it was later walled up with the compartment M191, when the tower was intentionally filled, possibly contemporary to the addition of the “full” semi-attached towers A40 and A14. The first proper barrier protecting the entrance was located in correspondence with a structure which was later obliterated by tower

<sup>10</sup> See also Valentini and Passaro in this volume

A66 and which was connected to wall M182. Here a recess, squared in shape and lined by four long wooden planks (about 2.5m in length), was used to house the heavy sliding timber that was securing the two-shutter door introducing to room A133 (Figs. 23, 24). A similar recess had to be located in the opposite side, in the place where tower A66 was later built.

The C-14 analysis made on the ship timbers located in M182, gave a date comprised between the 1320 and 1350,<sup>11</sup> which, so far, could be considered the *terminus post quem* for the addition of wall M182, as part of one of the series of renovations carried on in the area.

Room A133 was a sort of antechamber which was introducing to the monumental staircase. The evidences pointed out to the location of benches, leaning to the walls delimiting the room (M183, M184 and M511) and confirm that the antechamber was a sort of waiting place where soldiers or citizens were stationed in wait to be received by the governor of the town. A circular door socket is still visible *in situ* close to wall M511, although not anymore in the original position.

The monumental staircase was brought to light during the excavations of Zarins and Newton (2012, 52), who mention the finding of fifteen of sixteen steps, covering a length of thirteen metres. Badly preserved and later consolidated, the staircase is about 3 metres wide and the low inclination led the archaeologists to propose it was constructed to allow animals to enter into the building. A sounding carried out in room A5, corresponding to the room whose floor was at the same elevation of the highest step of the staircase, reveal that the premise was filled with an intentional deposit (SU10) whose materials are dated from the 13<sup>th</sup> to the 15<sup>th</sup> century (Fusaro 2019). These evidences suggest that the staircase was built on an intentional accumulation contemporary to the addition of M182 and the re-arrangement of the gate complex.

From room A5 it was possible to access to corridor A49. The presence of the base (measuring 46×46 cm) and part of the trunk of an octagonal column well fixed to the platform M47 by means of a strong mortar, suggests that the ceiling of the corridor was supported by columns. The following room, which introduced the visitors to the core of the citadel, was A51 where the investigations stopped after the preliminary clearing because of the bad state of preservation of the masonry of the walls delimiting the premise. The actual gap between the elevation of the floor in A49 and the walking surface in A51 has been bridged through the addition of some modern, distinguishable and reversible steps made of stone. A further small postern gate, possibly conducting to service rooms, was located in the eastern curtain wall (M148) and it was walled-up already in antiquity. As far as the functional definition of the rooms is concerned, it remains mostly unknown for most of them.

Significant exceptions at al-Balīd are the guarded passage at the entrance (A133), and a room located in the north-western portion the building (A33) which was interpreted as an armoury, because of the finding of ballistic devices, such as iron cannonballs and mangonels, and materials used to prepare gunpowder such as a large block of raw sulphur and pieces of bitumen (Figs. 25, 26; see Pavan *et alii* 2020, 177-178).

Not sure is the location of the receiving hall, where the guests or the visitors were received by the governor. The noteworthy size of room A2 (Fig. 27), eleven metres long, the presence of a chair-like bench lying on wall M14 and its position in south side of the citadel, favourable to catch the pleasant sea-breeze, allow to propose that at least in an early phase, before the addition of the staircase and of the most external southern curtain, room A2 was used as receiving hall. Utilitarian rooms as kitchens were not individuated, despite the finding of a quite a large number of stone vessels, cooking pots and objects such as a noteworthy bronze cauldron with cylindrical spout which could has been used to store and distribute water. They were possibly placed at the ground floor, around the open court, close the water devices and to the stores and where also *tannūrs* for baking bread were supposed to be located.

Beside the rooms linked to its residential function, the building was surely provided of warehouses, barracks and prisons. These have been possibly identified with some very small rooms located in the northern part of the building (A34 and A24), basically walled pits, closed on the top with a wooden plate and lacking doors, where prisoners were just thrown and let die as in use in the forts in north Oman till modern times (Fig. 28).

The premises of the room appear organized according to blocks which constituted autonomous units. A clear example of this arrangement is the cluster of premises made of rooms A119, A115, A112, A114 and A113, discovered at the second floor of the building which forms an isolated block in the eastern side of the citadel (see Figs. 13, 14). Many but not all the rooms were communicating: a large number of them lack of doors and the entrance was through the ceiling by means wooden ladders or steps made of stone blocks leaning

<sup>11</sup> I wish to thank Tom Vosmer for proving me these results which are still unpublished.

on inclined wooden plate, as still visible in traditional Dhofari house standing, although in precarious conditions, in some quarters of Ṣalālah.

The citadel was provided, in the period of its maximum extension, of two additional complexes located eastward and northward. The eastern extension has been excavated in its northern portion (rooms A57, A52, A56, A71, A72 and A74) and in its southernmost part (room A77) because of the structural problems of the masonry in the central portion of the eastern curtain. The northern part of the extension underwent a number of modifications during the time as evidenced by the addition of partition walls (such as M264 and M209) and by the walling-up of the communicating doors (M265 and M162) (Figs. 29, 30). The position of the premises, which were connected to the building but, in the same, were projected towards the exterior, allowed to propose the interpretation of the rooms as stables. Rectangular in shape, the premises were provided of a plastered gently sloping floor, standing on an earlier pavement made of stone slabs.

Noteworthy has been the discovery, in room A52, of some iron arrowheads, an iron buckle, a dagger and a number of bronze fittings which have been interpreted as elements of a shield: they were possibly part of the equipment of a knight whose horse was recovered in the stables of the citadel. An articulated and not univocally interpreted complex of rooms, which occupied a very wide area north from the citadel, was the focus of works carried out from September 2019 to March 2020 when the on-field investigations were suspended because of the arise of the pandemic (Fig. 31). The area was already subject of investigations in 1999 when the so-called Junction wall, running N-S, was excavated under the direction of M. Jansen. This wall which was interpreted as made of two compartments, one thinner on the inner side, and one wider on the outer side for a total width of about 3 m, connected the citadel with the northern city wall of the city, according to the typical lay-out of the court-citadels (Bacharach 1989).

In 2007 works in this area restarted with J. Zarins and L.S. Newton who brought to light some rooms in squares 3-7 and 227-230, north from the buttress M94 and the tower A37, and carried out a deep sounding further north, in square 354. A long room (NH2 according to recent nomenclature), rectangular in shape, was partially exposed in 2007, showing foundations resting below the tower A37 and the recent archaeological evidences confirmed that the buttress/retaining wall M94 was built above some previous walls, re-arranged on top of intentional accumulations to level the foundations.

The northern rooms were subjects of many modifications over the time and remained in use, although with variations, at least until the phase contemporary to the addition of the circular tower A37 as evidenced by the discovery of eleven stone balls connected with catapult of mangonel activity (Zarins, Newton 2012, 156). A late re-use of these premises was recently confirmed by the finding, during the works of 2019 and 2020, of a further stone cannonball and by ceramic material dated to the 16<sup>th</sup> century such the base of Chinese porcelain with mark from SU309 (C. Visconti, pers. comm.) and a number of pieces of Bahla Ware from the same archaeological context.

Since the beginning of the excavations, these rooms have been interpreted as washing and/or bathroom facilities (Zarins, Newton 2012, 32) and drains for water. The excavations terminated in 2020 brought to light numerous premises, some of them carefully plastered, a number of channels and a well provided of steps (Fig. 32). While most of the rooms seems were obliterated in the 16<sup>th</sup> century, contemporary to the works aimed to fortify the citadel, the elongated room adjacent to tower A37, the well and the premises around have been in use until the last occupational phase of the city, possibly in connection with ephemeral structures not preserved and located in the large area placed between the city wall and the citadel (Figs. 33, 34).

#### THE DEFENSIVE SYSTEM AND THE MODIFICATIONS OF THE CITADEL'S PLAN

During the years 2016-2020 the whole perimeter of the citadel was clarified, as well as the overall sequence of the progressive additions and modifications occurred along the curtain wall. This was very possibly capped of crenellations made of a continuous series of alternating merlons, according to pattern in use in the traditional Dhofari private and public architectures, both civil and religious (Costa, Kite 1985). The recent discovery of some stone decorative elements terminating with a component in form of ogive (Fig. 35), could provide a suggestion about how these architectural decorations were arranged. Both the internal and external walls were whitish plastered with a mixture made of abundant calcite with minor gypsum and traces of quartz (Fig. 36).

Because of the additions, the modifications and the obliterations occurred during the long occupation of the building, it is indeed quite challenging to define a sequence of plans illustrating the development of the fortification system. However, the study of the vertical stratigraphy, together with the analysis of the masonries



conducted in December 2019 in collaboration with the University of Naples L’Orientale,<sup>12</sup> allowed the proposal of four different main constructional phases (Fig. 37).

*Phase 1:* the citadel was supposed to be a squat squared building, with four quadrangular jutting towers at the corners, according to the typical arrangement of the pre-gunpowder forts in Oman (D’Errico 1983, 298). Scanty evidences attributed to this phase are currently visible: the wide premise A39, originally a tower, later included in the enlargement and fortification of the citadel with a possible different but still undefined function; the double portal made of walls M111 and M115, giving access to the internal court and the compartment M14, belonging to the curtain wall and later leaning wall for M240. The abovementioned masonries, associated with this first phase of the citadel, are made of blocks of very large size, quadrangular (maximum size 152×34 cm) or, very rarely, cubic-shaped (64×76 cm) with occurrence of wooden elements between the courses or in the interior of the compartments.<sup>13</sup> A header/stretcher method where the blocks were bonded with lime mortar seemed to be preferred, in this first phase, to the most commonly attested rubble masonry. In 1998 Jansen (2015, 166) noticed that the header and stretcher pattern was used in walls 1254 and 1248 (Jansen’s nomenclature), located on the north-west corner of the citadel, and in wall 1220, on the south-west corner, beside the building of first phase located in area B and excavated by Costa. Later excavations revealed that this building technique was used in relation to the early west and north city walls, the early quay by the west bridge area, all the city gates (Newton, Zarins 2017, 69), suggesting that the technique was a distinctive marker of the first constructional phase.

*Phase 2:* a wider surface, due to the presence of two extensions located in the northern and eastern sides (the washing area and the stables, as they have been tentatively interpreted, see above), together with a much more monumental appearance, characterized the citadel in the second constructional phase. The entrance was shifted to the southern side and a monumental staircase allowed the access to the upper part and, so far, to the interior of the citadel. The average size of the constructional blocks results reduced. In this second phase the header/stretcher method coexisted with the rubble masonry, consisting of a double wall with a rubble filling in the interior, made of an irregular mix of unhewn stones, earth and, sporadically, pottery sherds, which – from this period – started to be the most employed building technique. Apparently, the building was lacking of jutting towers and the sides did not present indentations in the central part, but a possible jutting “body” in the northern side. The fortification system was increased on three sides (north, west and south) by means of a progressive addition of compartments, lacking on the eastern side where the stables and utilitarian rooms were possibly located. The so-called Junction Wall, connecting the citadel with the city wall, belongs to this period.

*Phase 3:* considerable changes occurred at the citadel during this phase, coeval to the arrival of Turks and Portuguese in the Indian Ocean, at the beginning of 16<sup>th</sup> century. “Full” circular towers were added onto three of the four corners and in correspondence to the gate. The northern and eastern extensions were obliterated and the citadel gained a much more solid and massive appearance. Bastions, buttresses and casemates, which were intentionally filled by debris and stones of different size, were added to the building in order of absorbing the impact of cannon balls. The occurrence of casemates in the northern side show that danger for the occupants of the site could come also from the north and not only *via* sea. The fortification system was moreover increased by the intentional obliteration of a number of rooms located along the eastern and southern curtain of the citadel, through fillings with sandy matrix or made of debris, as clearly emerged, for example, during the excavation of room A33 (Pavan *et alii* 2020, 177). In the course of this phase the internal court, or at least a large part of it, was intentionally obliterated with a series of floors, built in close sequence.

*Phase 4:* The very last constructional phase of the citadel is mirrored in the most external perimeter walls, nowadays visible. The curtain wall has often an irregular orientation because of the necessity to incorporate the presence of earlier structures standing below. Most of these compartments were clearly built up to reinforce some earlier structures or to improve static problems which occurred mainly in connection with the adjoining elements such as, for example, the towers. The masonry related to this phase shows a considerable amount of wedges between the joints and rarely the blocks are well shaped. Polygonal courses with a puzzled block arrangement are evidenced as well. Mortar, wooden elements and plaster have not been noticed. The

<sup>12</sup> Aim of the works conducted in 2019 was the creation of an atlas of the masonries for the site of al-Balīd, born out of the need to record and manage the large amount of data coming from the investigations carried out, over the time, by different archaeological missions (Albright 1982; Costa 1979; Jansen 2015; Newton, Zarins 2017; Pavan *et alii* 2018, 2020). The methodology developed for the study of the walls has been based on the Archaeology of the Masonry which basically consists of the careful stratigraphic analysis of the upstanding structures. Seven main types of masonry, named from letter A to letter G, were identified during the first phase of the works on the base of the following elements: building technique, layout, manufacturing, finishing and size.

<sup>13</sup> See Type A in Passaro in this volume.

archaeological evidences revealed the occurrence of parts of building made of bricks (Pavan *et alii* 2020, 176). The living surface appeared moreover raised up with a progressive filling of the central court and the following obliteration of the possible well located at the ground floor. The water supply was guaranteed by reservoirs and cisterns which conveyed rainwater to the lower floors through vertical plastered channels still visible in different parts of the building.

#### *Light and water at the citadel*

The outer walls of the citadel were supposed to be, at least in the lower storeys, without fenestrations, but provided of arrow-slits for ventilation. The illumination for most of the rooms, excluding those facing the internal court and benefiting of the natural light, was so far obtained by means of lamps which have been indeed found, complete or in fragments, in large number during the excavations of the building.

During the investigations, at least a light well, located in the southern portion of the citadel, was identified (Fig. 38) but not excavated for safety reasons related to the static of the building. Light wells used for also for ventilation (*shamsiyya*) represent a typical element in the vernacular architecture of Dhofar where they are usually located at the centre of the house and they are often provided of stairs leading to the upper floors (Costa, Kite 1985, 136-137).

Water supply was, on the other side, one of the main issues that the occupiers of the citadel had to face. It is very possible there was a well located in the centre of the court but this was not the unique one, as evidence by the presence of the plastered well A41 unearthed in the western portion of the citadel by the Americans of AFSM (Albright 1982, 61) and partially cleared during the recent excavations. Although the study of the water devices related to the collection, conservation and distribution of water within the citadel is in course, a number of reservoirs and plastered basins were individuated on the top of the structure (Fig. 39). These seem to have been in use during the last occupational phase of the building, after the obliteration of the central court and of the well there located.

Vertical channels, located within the walls, were used to distribute the water from the reservoirs located on the top of the citadel to the lower floors. However, draining channels, used to move water outside the curtain wall were also brought to light along the western side, although obliterated by later re-arrangements (Fig. 40).

#### *Dating*

As discussed above, four main constructional phases have been tentatively individuated on the basis of the architectural development of the building, the increasing and modifications occurred to its fortification system and to the plan, and the analysis of the masonry. A phase preceding the so-called Phase I was individuated by J. Zarins and L.S. Newton (2017, 69) below the monumental structure of the citadel. The remains, covered after the excavation and no visible to date, consist of thin walls with an orientation different to the upper ones, brought to light under the south-western circular tower. Structures differently aligned compared to those above, which have been tentatively assigned to the early constructional phase of the town, emerged during a number of deep soundings carried out in some buildings of the city such as the Grand Mosque (Costa 1979, 137-138, fig. 25) and a small mosque located east of the citadel (Zarins 2007, 316).

Finding a correspondence between the constructional phases, the historical periods and the different dynasties who ruled over al-Balīd, it is however quite challenging, mainly as far as it concerns the earliest phases, only very partially archaeologically investigated. It is certain that the imposition of al-Balīd in an international scenario took place under the Rasūlid dynasty that in 1279 conquered Zafār. The battle, which took place in the suburb of 'Awqad, close to Raysūt, the port of Zafār, is narrated by the historian al-Khazrājī as conducted with great deployment of naval and land forces which attack the town by sea, and, by land, with detachments traveling along the coast and *via* Hadramawt (see Costa 1979, 147).

During the Rasūlid period the city enjoyed its most wealthy period, being as it was a nodal point in the international trade between the 13<sup>th</sup> and the 15<sup>th</sup> centuries. A phase of crisis at the site was certainly recorded in the 16<sup>th</sup> century, because of the presence of Portuguese and Turks and their control over the trade in the Indian Ocean. The political and economic crisis was possibly exacerbated by a number of dramatic natural and atmospheric phenomena such as problems of siltation of the lagoon and a huge cyclone which apparently invested the coast of Dhofar in the course of the 17<sup>th</sup> century (Newton, Zarins 2017, 9). All these events contributed to the progressive economical weakening of the city, which was already penalized by the politics of the Kathīrī Dynasty who ruled over Zafār during the 15<sup>th</sup> and 16<sup>th</sup> centuries (Smith 2002). Among the interventions aiming of encouraging the growth of the Kathīrī centres in Hadramawt, there was a ban on the trade in horses, frankincense and fish-oil from Zafār (see Costa 1979, 149). The city, like the entire region,

continued to remain under the Kathīrī dynasty until 1650, when the Ottomans took possession of the whole area.

The material evidences emerged during the excavations conducted between 2016 and 2020 fit well with the political, cultural and economic changes which marked the history of the town starting from the Rasūlid domination. The earliest coherent pottery assemblage so far discovered at the citadel dates between the 13<sup>th</sup>-14<sup>th</sup> century and the 15<sup>th</sup> century and consists of a number of well dated imported production (Yemen Yellow Ware, Chinese Celadon, Egyptian and Syrian stonepaste, Iranian glazed and unglazed wares) to which the local counterpart is represented by the Dot-and-circle Ware (Fusaro 2021, 76-79; Pavan *et alii* 2020, 178-180).

The progressive decay occurred when Portuguese and Ottomans arrived in the Indian Ocean during the 16<sup>th</sup> century, is coherently mirrored into the archaeological evidences where a progressive and clear decrease of the imported materials it is witnessed (Pavan *et alii* 2020, 178; Fusaro 2021, 79).

A significant recovery of the town is finally recorded from the beginning of the 17<sup>th</sup> century (Pavan *et alii* 2020, 176; Fusaro 2021, 79-83). During the excavation of the citadel a good number of polychromous porcelain from East Asia have been found, together with Batavia cups and some blue and white porcelain belonging to the Qing period (1644-1911). Conical bowls, carinated dishes together with jars of large size manufactured in the so-called Bahla Ware has been discovered as well as glazed containers from the Iranian regions, underglaze painted earthenware vessels from Yemen and fine unglazed grey jugs from Egypt. A number of coffee cups in Haysi ware and few stands, manufactured in Yemen, were moreover found (Pavan *et alii* 2020, 176-177; Fusaro 2021, 79-83). If the historical reconstruction of the town and its changing fortunes appears coherent since the 13<sup>th</sup>-14<sup>th</sup> centuries, definitely puzzling is what happened at al-Balīd before the Rasūlid conquest.

According to the general reconstruction of the history of the town, the area of al-Balīd was at the very beginning under the dominion of Manjū / Manjawīyyūn rulers, who were supposed to come from Sīrāf. The Ḥabūdids, probably from Shibām (Yemen), took the power in 1221 (Guest 1935, 403). The events related to this shift of power are not very clear: the sources mention a destruction of Zafār at the hands of the Ḥabūdids and the construction of a new town, called al-Manṣūra (Smith 1985, 83; Costa 1979, 146), but still to clarify is the location of the town which was destructed and the one of the new foundations (about this see Zarins 2007, 321; D'Andrea in this volume). Unfortunately, the archaeological remains coming from the citadel offer very little evidence to support the sources related to this early period. A single sherd of sgraffiato splash (SU279,100) which could be dated to the 10<sup>th</sup>-12<sup>th</sup> century (A. Fusaro, pers. comm.) has been discovered in one of the premises located north of the citadel, but in the current state of evidences has to be considered residual.

C-14 analysis conducted on a number of wooden elements which were mainly re-used ship timbers, brought to light in the north-eastern and north-western corners of the citadel, revealed 12 dates ranging from 1000 to 1200 AD (Jansen 2015, 356-357), dates which were confirmed by more recent analysis conducted on wooden planks recently discovered at the citadel (see Ghidoni in this volume). It is indeed a very tempting working hypothesis to date the first monumental phase of the citadel between 1000 and 1200 contemporary to the Minjuids and the following power takeover of the Ḥabūdids in 1222, but the archaeological evidences to date have not been yet identified.

Because of the structure of the building itself, with the earliest structures obliterated by the progressive additions occurred over centuries and the precarious condition of the masonries which do not allow to get to the lower storey, the citadel unfortunately will never answer to questions related to the foundation of the site. However, it is one of the aims of the future activities the analysis of this early occupational phase which will be conducted through the study of the sources and through new archaeological investigations focused in targeted contexts.



Fig. 1 - View of the citadel from the northern arm of the lagoon (Photo by S. Al Shahri).



Fig. 2 - View of the citadel from south.



Fig. 3 - General view of the site with the location of the citadel in the north-western corner of the town (Photo by B. Isenberger).



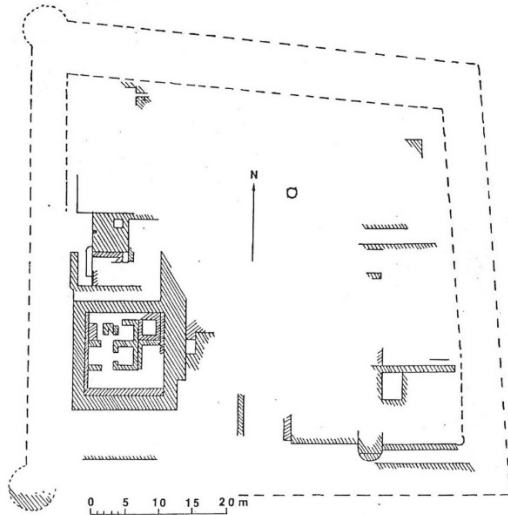


Fig. 4 - Plan of the citadel with the excavated structures after the works of the American Foundation for the Study of Man (Albright 1982, Pl. 17, Fig. 26).

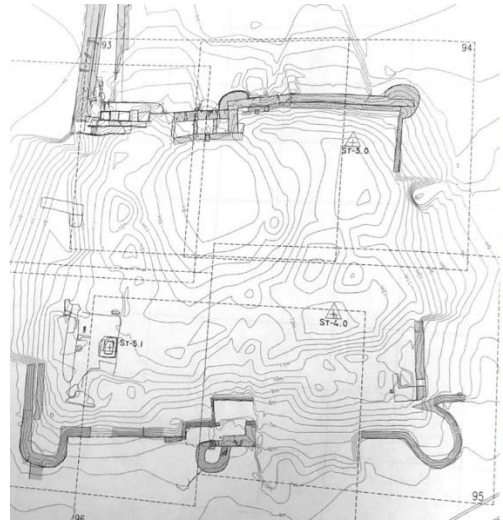


Fig. 5 - Map of the citadel with the excavated structures after the works of the University of Aachen (Jansen 2015, 182)



Fig. 6 - General view of the citadel after the works of J. Zarins and L.S. Newton in 2008 (Photo by L.S. Newton).



Fig. 7 - Aerial view of the citadel after the works of J. Zarins and L.S. Newton in 2008 (Photo by B. Isenberger).



Fig. 8 - Aerial view of the citadel, May 2018 (Photo by A. Massa).



Fig. 9 - Aerial view of the citadel after cyclone Mekonu, May 2018 (Photo by A. Massa).



Fig. 10 - Consolidation works at the second storey of the citadel, June 2019 (Photo by A. Gratteri).





Fig. 11 – Orthophoto of the citadel (Plan by A. Massa).

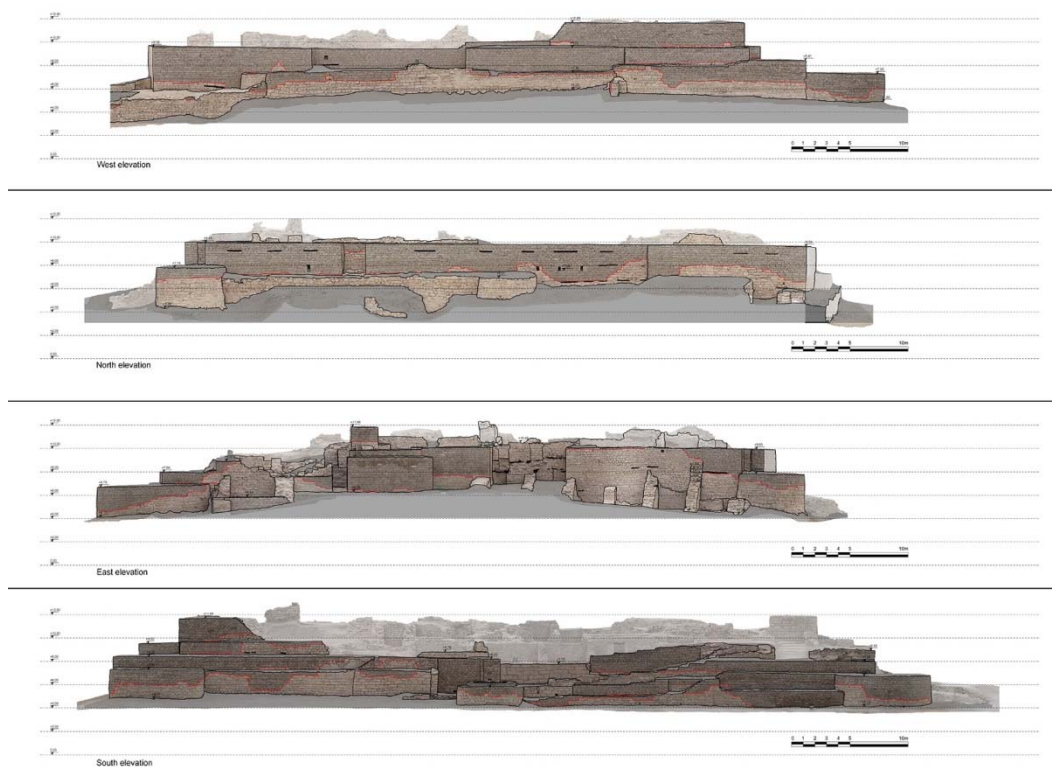


Fig. 12 - Elevations of the four sides of the citadel (Drawing by A. Massa).

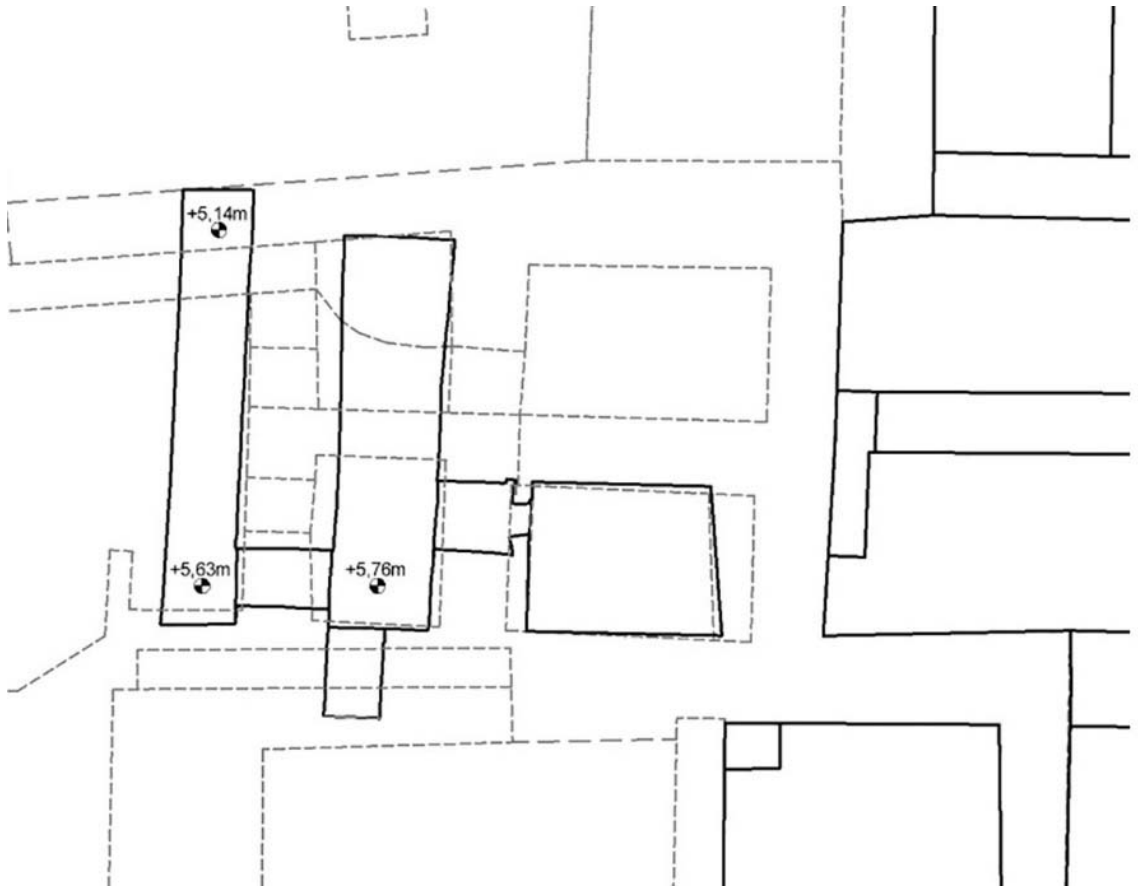


Fig. 13 - Plan of the rooms individuated at the second storey of the citadel (Plan by A. Tilia).

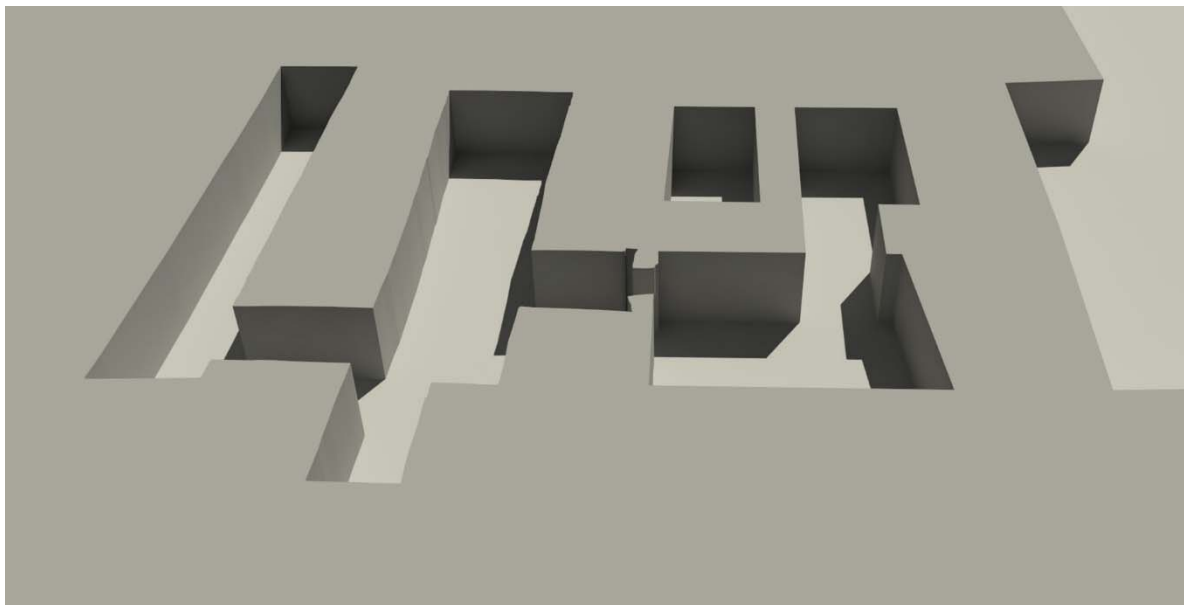


Fig. 14 – 3D rendering of the second storey of the citadel by A. Tilia.





Fig. 15 - Deep sounding in the southern room A67, below SU271 floor.



Fig. 16 - Sand sterile deposit in the eastern room A57.



Fig. 17 - Floor SU227 with post-holes in the court citadel.





Fig. 18 - The monumental portal M111, giving access to the citadel in the early constructional phase.

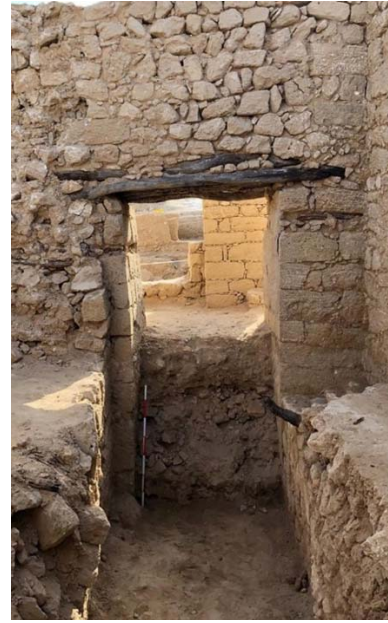


Fig. 19 - The monumental portal M115, giving access to the citadel in the early constructional phase.



Fig. 20 - Possible location of the formal gate, specular to the double portal M111-M115, on the eastern side of the citadel (Photo by A. Massa).





Fig. 21 - Detail of room A58, with the walls flanking the possible entrance.



Fig. 22 - General view of the monumental entrance (Photo by A. Massa).



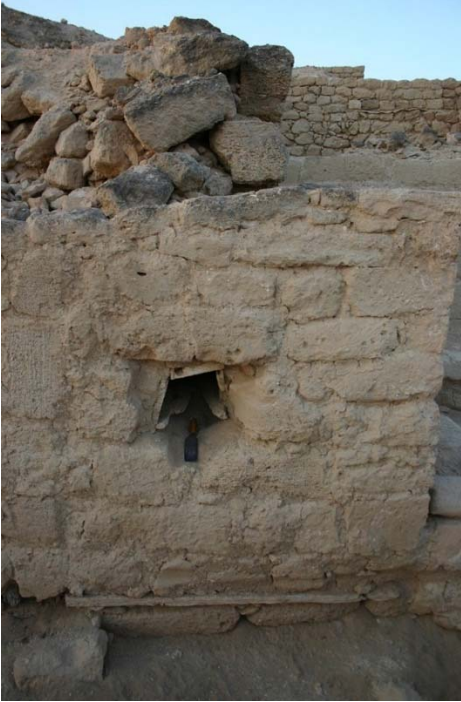


Fig. 23 - Wall M182 with the recess housing the sliding timber securing the two-shutter door introducing to room A133 (Photo by A. Ghidoni).



Fig. 24 - Detail of the wooden planks lining the recess (Photo by A. Ghidoni).



Fig. 25 - Room A33, interpreted as the armoury of the citadel.



Fig. 26 - Mangonels and raw sulphur block lying on the floor of room A33.





Fig. 27 - Room A2, the receiving hall of the citadel.



Fig. 28 - The walled pit A34, possibly used as prison.



Fig. 29 - Aerial view of the eastern extension of the citadel (photo by A. Massa).

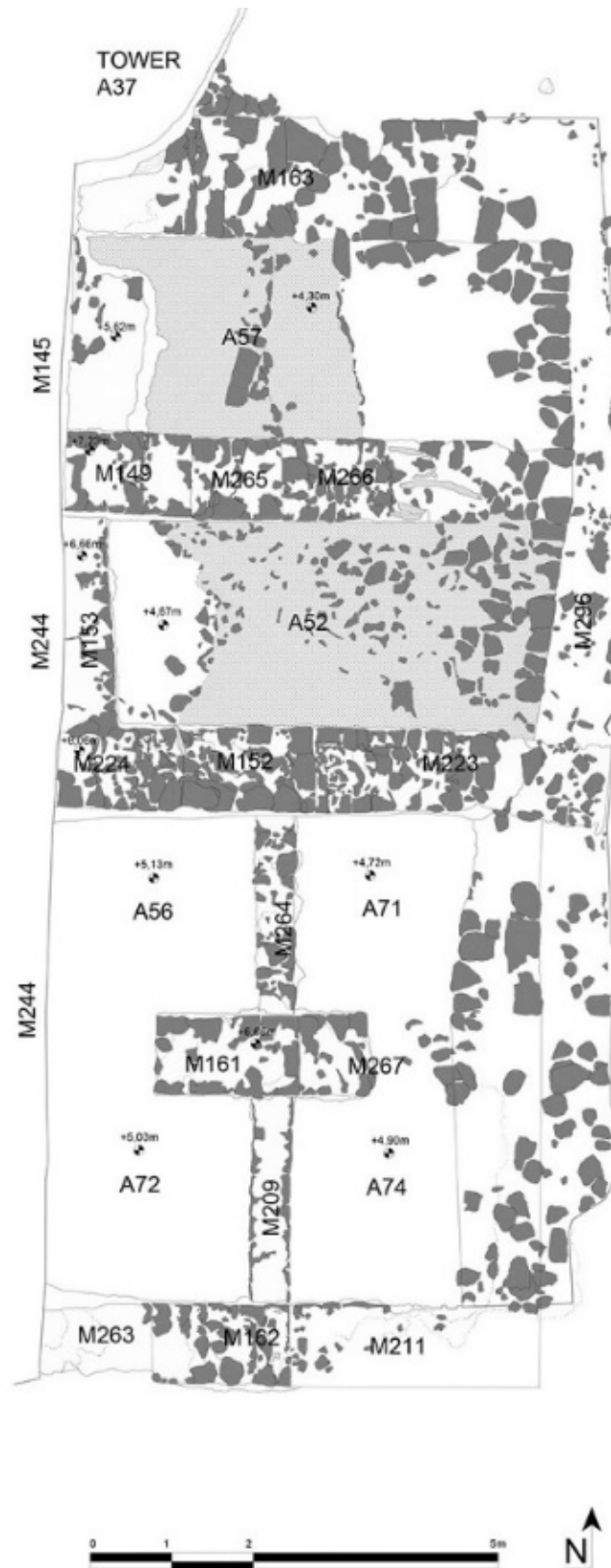


Fig. 30 - Plan of the rooms interpreted as the stables of the citadel (Plan by A. Massa).





Fig. 31 - Aerial view of the northern extension of the citadel (Photo by A. Massa).



Fig. 32 - Well located in the northern extension of the citadel.





Fig. 33 - Plaster rooms, located north of the citadel, obliterated in the 16<sup>th</sup> century.



Fig. 34 - Channels and workshops, north of the citadel, related to the last occupation phase of the building.



Fig. 35 – Architectural element in form of ogive.



Fig. 36 - Detail of the receiving hall A2 with different layers of plaster on the walls.





Fig. 37 - Plans related to the four different main constructional phases of the citadel (Plans by C. Passaro).



Fig. 38 - Light well (*shamsiyya*) located in the southern sector of the citadel.



Fig. 39 - Plastered basins individuated on the top of the citadel (Photo by A. Massa).



Fig. 40 - Draining channel crossing the western curtain wall.

## ANNEX

## Visits, archaeological surveys and excavations in Zafār/al-Balīd (1834-2019)

Andrea D’Andrea, Roberta Giunta, Alexia Pavan

<i>Years</i>	<i>Activities</i>	<i>References</i>
1834-36	First visit by Stafford Bettesworth Haines to ‘Awqad (lit. Audád), Salalah (lit. Ṣallálah), Ḥāfa (lit. Haffer) and the “extensive ruins located two miles and a half E.N.E. of Haffer, near a fresh-water lake”.	Haines 1845, 118
1836	Charles John Cruttenden visits Salalah (lit. Solahlah), Dahrīz (lit. Dyreez), Ḥāfa (lit. El Hafah), and the remains of an old town called El Bellut (i.e. al-Balīd) located between Ḥāfa and Dahrīz.	Cruttenden 1836, 187
1839	Henry John Carter draws the first schematic plan and provides a detailed description of the site, which was located between the towns of Salalah (lit. Silalah) and Ḥāfa (lit. El Hafa) on the west, and that of Dahrīz (lit. Dareez) on the east. He visits the citadel ruins (pp. 229-30) and the ruins of the great mosque (lit. Temple or Mosque), which originally contained one hundred and eighty-three pillars (p. 230). He points out that the site was divided into two parts, of which only the eastern one was fortified (p. 225).	Carter 1844-46 (The same information can be found in Carter 1846)
1883 and 1884	Samuel Barrett Miles draws a historical picture of the region (pp. 498-514), and gives a description of the site, which he locates between Ḥāfa (lit. Al-Hafa) and Dahrīz (lit. Dareez). He clearly identifies the city walls, the towers, the ditch, the citadel, the great mosque and the custom house (p. 544). He also provides information on the burial grounds at al-Ribāt (lit. Robot; p. 547).	Miles 1919; Marshall 1989, 74
1894	The Bents (James Theodore and his wife, Mabel) visit al-Balīd (lit. Al Balad) and al-Ribāt (lit. Robot), which were the ancient capital of Dhofar (p. 115). Based on Sprenger’s work (1864), Bent points out that the ancient name of al-Balīd was Zafār (lit. Zafar), which was destroyed in 618/1221-22, when al-Manṣūra (lit. Mansura) was built, “under which name the capital was known in early Mohammedan times” (p. 116).	Bent 1895
1895	The Bents visit Dhofar region for the second time. With regard to al-Balīd and al-Ribāt, they provide very similar information to that of the 1894 publication.	Bent Th. and M. 1900
1918	Charles Craufurd visits al-Balīd (lit. Al Bilad), which is in a state of complete ruin, and the graveyard located in the western area. He also takes the first photographs of the Great Mosque.	Craufurd 1919

<i>Years</i>	<i>Activities</i>	<i>References</i>
1930	Visit to the ruined city of al-Balīd (lit. Balid) by Bertram Thomas (p. 38), “the most extensive ruins of the Dhofar (lit. Dhufar) plain” (p. 8). He takes some photos on the site (see also Peyton 1983, p. 75).	Thomas 1932
1930 ca.	Sultan Said bin Taimur carries out some excavation works along the east end of the south side of the citadel.	(Quoted in Albright 1982, p. 59)
1945	Wilfred Thesiger arrives for the first time in Ṣalālah, “the capital of Dhaufar”, and visits the site and the numerous ruins scattered around the city and the plain (pp. 43-44).	Thesiger 1959 (ed. 2008)
1952-1960	First archaeological excavations (started in spring 1952) under the auspices of the American Foundation for the Study of Man (AFSM). Wendell Phillips was the sponsor of the expedition; Frank P. Albright the main archaeologist and responsible of the whole work. The AFSM works involved the city wall, the towers, the two city gates, the citadel (“Area A”), the great mosque, the western bridge, four habitations in the western side of the walled city (“Area H”), and a number of buildings and mosques scattered around the site which are shown on a map drawn by Phillips (fig. 21; see also Zarins 2007, fig. 2). However, a full account of the excavation work and a complete list of the finds are lacking. Albright (p. 106) provides only a list of 90 artefacts, summarily described and without graphic or photographic documentation. Unpublished materials are held by the AFSM in various locales in Virginia.	Phillips 1971; 1972; Albright 1955; 1982
1977-1981	Paolo Costa leads three seasons of work (started in spring 1978, following a first survey in winter 1977) on behalf of the Omani Ministry of National Heritage and Culture and in cooperation of the local authorities. Costa employs a large team of experts, analyses the site for the first time with a scientific approach, and provides a detailed site plan with a 50 m interval grid system. The main excavation activities concerned the great mosque, the western bridge and city gates (called “Area A”), and an area located in the centre of the walled city (called “Area B”). However, once again, a final analysis of the materials and a study of the ceramic fragments are lacking.	Costa 1979
1980	Giovanni Oman, upon invitation of Costa, carries out a preliminary study of the epigraphic material from the western cemetery of the site (1983), as well as from Ṣalālah and Mirbāṭ (1982).	Oman 1982; 1983; 1989
1994	At UNESCO’s request, Michael Jansen draws up an executive project for the development of cultural tourism in the Governorate of Dhofar.	Jansen 2015, p. VII
1995-2003	The German archaeological mission from Aachen University, directed by M. Jansen, in cooperation with the National Committee for the supervision of Archaeological Survey in the Sultanate, carries out numerous campaigns. The main activities carried out by the mission were: the first topographic surveying of the site (1995-1996; Jansen 2015, p. 31); the application of digital prospection and three-dimensional documentation in conservation of architectural remains (1997-2000; <i>Id.</i> , pp. 32-37); the documentation methodology for the archaeological activities (2001; <i>Id.</i> , pp. 37-40). The excavation activities involved the Great Mosque (Sept. 1995; Sept. 1996; March 1997; Aug.-Nov. 1997; <i>Id.</i> , pp. 49-92); the citadel (March 1997; Aug. 1998; March 1998; Febr.-April 1999; Oct.-Dec. 1999; spring 2000; Nov.-Dec. 2000; March-April 2001; <i>Id.</i> , pp. 161-208); the northern and western city wall (Sept. 1996; Sept. 1997; March-April 1998; Oct.-Dec. 1999; March	Powell, al-Salmi 1997; 1998; Jamme 1998; Koschick 1998; Powell 1998a; 1998b; Yule 1998b; 1999a; 1999b; Hermann 1999; Jansen 1999; Al Shamsi 1999, White 1999; 2000a; 2000b; White, Unterlechner 1999; 2000; Peshkov 2001; Peshkov, Voyakin 2001;



<i>Years</i>	<i>Activities</i>	<i>References</i>
	2000; Nov.-Dec. 2000; March-April 2001; <i>Id.</i> , pp. 93-160); the small mosques 655 and 940 (spring 2000; <i>Id.</i> , pp. 219-226); the House 803 (May-June 2000; <i>Id.</i> , pp. 231-232, 258-263); the courtyard 720 (May-June 2000; <i>Id.</i> , pp. 228-231, 237-257); the residential area south of the citadel (March 2000; <i>Id.</i> , pp. 232-233, 235-236). Seven soundings (1998; <i>Id.</i> , pp. 270-284) were moreover carried out with the aim of finding pre-Islamic evidences which, however, did not emerge. A number of conservation actions, such as the restoration of a number of columns, were performed as well.	Stevens 2001; Urban 2001; Franke-Vogt <i>et alii</i> 2003; Jansen 2001; 2002; 2003; 2015
1996-1997	Two excavation campaigns lead by an archaeological team of the Sultan Qaboos University focused on the so-called “funerary mosque” with its facilities and burial area.	Ibrahim, Al Tigani 1997; see also Jansen 2015, pp. 209-217.
1996-1998	Mauro Cremaschi conducted a number of geomorphological surveys within the works carried out by the Italian Mission to Oman (IMTO) in the coastal area of Dhofar and in the interior of the region. In 1997 a palynological study was carried out as well with the samples processed by the University of Amsterdam (Carina Hoorn). At al-Balīd tests were conducted on three different spots in order to collect palynological samples. The results confirm the idea of Costa that the settlement was a kind of virtual island and that the lagoon was connected to the sea until recent time.	Hoorn, Cremaschi 2004
1997-2004	First studies on ceramic material with proposals for typologies	Yule 1998a; Franke Vogt 2002; Yule <i>et alii</i> 2005; Yule, Muhammed 2006
1998	Within the frame of the Oman Maritime Heritage Project, Jana Owen made a short reconnaissance campaign in the lagoon of al-Balīd. <a href="https://museum.wa.gov.au/maritime-archaeology-db/maritime-reports/oman-maritime-heritage-project">https://museum.wa.gov.au/maritime-archaeology-db/maritime-reports/oman-maritime-heritage-project</a>	Owen 1998
2000	A first sedimentological study is conducted by the Canadian Edward Reinhardt who prepared a PhD thesis discussing the development of the site from a palinological, sedimentological and micropalaeontological perspective.	Reinhardt 2000
2005-2012	Archaeological works are carried out by Juris Zarins and Lynne Newton under the auspices of the Office of the Adviser to H.M. the Sultan for Cultural Affairs, directed by Abdul Aziz bin Mohammed Al Rowas. Their work focused on the citadel, the western and south-eastern areas of the walled city, jetties, breakwaters, southern towers and gates, “Custom House”, a small mosque located to the east of the citadel and the building complex in the southwestern corner, outside the city wall. Most of the excavated material were cleaned, classified and placed in boxes.	Zarins 2007; Belfioretti, Vosmer 2010; Newton, Zarins 2010; 2014; 2017; Zarins, al-Jahfali 2012; Zarins, Newton 2006; 2012
2012-2018	Krista Lewis of the University of Arkansas at Little Rock directs new excavation works that lead to the discovery of a large multi-storey building, located in the south-western part of the site.	Lewis 2012; 2013a; 2013b; 2013c; 2014; 2015

<i>Years</i>	<i>Activities</i>	<i>References</i>
2015-2016	Excavation campaign by the Italian Mission to Oman (IMTO), University of Pisa, headed by A. Avanzini and directed by A. Pavan (October-December) and S. Lischi (February-March 2016). Works were carried out exclusively on the citadel following the request of HE Abdul Aziz bin Mohammed Al Rowas.	Pavan 2015; Lischi 2016; Pavan, Lischi 2016
2016-2019	The most recent archaeological work carried out at the site focused on the citadel and was conducted by Alexia Pavan under the auspices of the Office of the Adviser to H.M. the Sultan for Cultural Affairs, directed by Abdul Aziz bin Mohammed Al Rowas. New and important results have also been achieved through the study of ceramic and porcelain material, as well as ship timbers and coins.	Pavan 2017-18; 2019; 2021; Fusaro 2018; Pavan <i>et alii</i> 2018; 2020; Fusaro 2019; Pavan <i>et alii</i> 2019; Annucci 2020; Fusaro 2020a; 2020b; Ghidoni 2020; Pavan, Visconti 2020

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## General index

- Aachen University, 17, 23, 33, 137, 150  
 ‘Abbāsids, 16, 118  
 ‘Abd al-Kādir b. ‘Abd al-Waḥīd b. Wāthik  
 Ibrāhīm b. al-Muzaffar ‘Amr b. ‘Alī, Malik al-  
 Fattāh, 140  
 ‘Aden, Yemen, 87, 90, 119, 121  
 al-Afdal al-‘Abbās (r. 1363-1377), 119  
 Afghanistan, 20, 118  
 Africa / East Africa / Eastern Africa, 67, 70, 82,  
 101, 104, 107, 118, 120, 122, 126, 129  
 Aḥmad b. Manjawī, 3, 15  
 Aḥmad b. Muḥammad b. ‘Abd Allāh b. Mazrū‘  
 al-Ḥabūḍī, 4, 8, 9, 11, 12, 15  
 al-Aḥmadiyya, Dhofar, 4, 15  
 Āl Bū Sa‘īd (1749-), 89  
 ‘Alī b. ‘Umar al-Kathīrī, 137  
 American Foundation for the Study of Man, 15,  
 23, 33, 127, 150  
 ‘Āmir III b. Dāwūd / Ibn Da‘ud (r. 1517-1538),  
 121  
 ‘Amr b. Ja‘far, 140  
 Anhui, China, 103  
 Anxi, China, 106  
 Arabia / Arabian Peninsula / South Arabia,  
 Western Arabia, 1, 4, 5, 6, 15, 23, 67, 70, 71, 84,  
 87, 88, 90, 101, 103, 104, 106, 108, 118, 122,  
 127, 128, 129  
 Arabian Gulf, *see* Gulf area  
 Arkansas, University, 151  
 Asia / East Asia / South Asia / Southeast Asia, 1,  
 31, 67, 82, 84, 85, 86, 89, 90, 101, 102, 103,  
 104, 106, 107  
 Asnāf, Yemen, 20, 21  
 Austria, 122  
 ‘Awqad / Audād, Dhofar, 6, 30, 137, 138, 140,  
 145, 149  
 al-‘Ayn, United Arab Emirates, 87  
 ‘Ayn Farḍ, Dhofar, 8, 15  
 Ayyūbids (in Yemen; 1174-1229), 15  
 Bā ‘Alawī, Dhofar, 137, 137, 138, 140, 141, 142,  
 145  
 Bachiene, W.A. (1712-1783), 5  
 Badr Bū Ṭuwayriq / Badr Bū Tuwariq (r. 1516-  
 1568), 121, 137  
 Badrīyat bint Ja‘far b. Badr Bū Ṭuwayriq, 140  
 Bahla, Oman, 28, 31, 84, 85, 89, 95  
 Bahrain, 68, 69, 75, 89, 121  
 Bahrain National Museum, 69  
 Balkh, Afghanistan, 15  
 Banī-bū Ḥasan, Oman, 118  
 Barakat Trust, 72  
 Baṣra, Iraq, 121  
 Belitung, Indonesia, 68, 77  
 Bent, Th. and M., 7, 15, 17, 19, 149  
 Berenike, Egypt, 68, 70  
 Bin ‘Afif, Dhofar, 137, 138, 140  
 Bin ‘Alī, Dhofar, 137  
 Birmingham, UK, 122  
 Bisya, Oman, 128  
 Bohemia, 121, 122  
 Bombay, India, 5  
 Bowen, E. (1694-1767), 5, 13  
 British East India Company, *see* East India  
 Company  
 British Foundation for the Study of Arabia, *see*  
 International Association for the Study of Arabia  
 al-Bukhārī, Muḥammad b. Ismā‘īl (810-870), 3, 4  
 Cambay, 137, 139  
 Canton, China, 129  
 Carter, H.J., 5, 6, 7, 9, 10, 14, 15, 16, 18, 19, 20,  
 149  
 China, 4, 5, 23, 67, 101, 102, 103, 104, 105, 106,  
 107, 128, 129, 133  
 Cruttenden, Ch., 6, 7, 16, 19, 149  
 D’Après, M. (1707-1780), 5  
 Dahrīz / Dareez / Diriz / Dyreez, Dhofar, 6, 7, 18,  
 19, 22, 149  
 al-Dakhiliyya, Oman, 128  
 Dalrymple, A. (1737-1808), 5  
 Dehua, China, 103, 106, 111, 128  
 Delhi sultans (1206-1526), 120  
 East Africa / Eastern Africa, *see* Africa  
 East Asia, *see* Asia  
 East India Company / East India companies /  
 British East India Company, 5, 23, 122, 105, 122  
 Egypt, 31, 50, 67, 68, 70, 71, 82, 84, 88, 89, 99,  
 106, 107  
 Europe / Western Europe, 5, 89, 90, 103, 105, 122  
 Exeter, University, 24, 67  
 Fachang, China, 103  
 Far East, 5, 128  
 Fars, 88  
 Fartaca, *see* Rā’s Fartak  
 Fāṭimids (909-1171), 117  
 Fayṣal bin Turkī (r. 1888-1913), 122, 126  
 Francis I (1708-1765), 122  
 Fujian, China, 102, 103, 104, 105, 106, 107  
 Geneva  
 Max van Berchem Foundation, 81  
 George VI (r. 1936-1952), 122, 126  
 Ghaznavids (977-1186), 20  
 Ghazni, Afghanistan, 20

- Guangdong, China, 102, 104, 106, 107  
 Gujarat, 21, 107, 137, 139  
 Gulf area / Gulf land / Gulf regions / Persian Gulf / Arabian Gulf, 67, 82, 84, 87, 88, 89, 99, 104, 106  
 Gulf of Suez, 5  
 Ḥabūḍa / Ḥabūza, Hadramawt, 15  
 Ḥabūdids, 15, 16, 17, 31, 118, 142  
 al-Ḥaddād, Dhofar, 137, 138, 140  
 Hadramawt / Wādī Hadramawt, 6, 7, 15, 16, 30, 83, 84, 90, 104, 122, 137, 138  
 Ḥāfa / Haffer / Al-Hafa / El Hafa / El Hafah, Dhofar, 6, 149  
 Haines, S.B., 5, 6, 149  
 al-Hamdānī, Abū Muḥammad al-Ḥasan (893-945), 3, 4  
 al-Harjāʿ, Oman, 8, 15  
 Ḥāsik, Dhofar, 3, 4  
 Ḥays, Yemen, 87, 90  
 Hijaz, 122  
 Hormuz, Iran, 15, 122  
 Horsburgh, J. (1762-1836), 5  
 Hubei, China, 103  
 Hungary, 122  
 Husi, China, 103  
 Ibn Baṭṭūṭa, Abū ʿAbd Allah Muḥammad (1304-1369), 11, 17, 67, 102  
 Ibn Dawud, *see* ʿĀmir III b. Dāwūd  
 Ibn Ḥawqal, Abū'l-Qāsim Muḥammad (10<sup>th</sup> c.), 3  
 Ibn Khaldūn (1332-1406), 3, 4, 8, 15  
 Ibn al-Mujāwir (13<sup>th</sup> c.), 4, 6, 8, 9, 14, 15  
 Ibrāhīm b. Yūsuf, al-Wāthiq Nūr al-dunyā wa'l-dīn (r. 1292-1311), 15, 16, 18, 21, 119, 140  
 India / Indian continent / Indian subcontinent / Sub-Indian continent, 4, 5, 23, 67, 82, 84, 85, 104, 107, 120, 124, 122, 128  
 Indian Ocean, 1, 3, 4, 5, 11, 23, 29, 30, 31, 67, 68, 69, 70, 71, 77, 89, 101, 102, 103, 104, 105, 107, 108, 128  
 International Association for the Study of Arabia / British Foundation for the Study of Arabia, 71  
 Iran / Iranian regions, 67, 82, 84, 86, 87, 88, 89, 107, 128  
 Iraq / Iraqi regions, 82, 86, 87, 88, 89  
 Istanbul  
   Topkapı Saray, 105  
 Jabrīn, castle, Oman, 69, 70, 71, 77, 79  
 Jiangxi, China, 102, 103  
 Jingdezhen, China, 102, 103, 105, 106, 107  
 Jordan, 47  
 Julfār / Julfār al-Matāf, Oman, 85, 88, 101, 106  
 Kathīrī (1395-1967), 16, 30, 31, 121, 137, 142  
 Kawd am-Sāila, Yemen, 84  
 Kenya, 70, 104  
 Khashm Nādir, Saudi Arabia, 106  
 al-Khazrajī, Muḥammad b. Ibrāhīm (d. 1258), 16, 18, 30, 117, 119  
 Khor Rori, Dhofar, 9, 127, 128  
 Khuriya Muriya Islands, Red Sea, 4  
 Kilwa / Sultanate of Kilwa, 119, 124  
 Kirmān, Iran, 86  
 Land of Mahra, 3  
 Lisht, Egypt, 70  
 London  
   British Museum, 128  
   Victoria and Albert Museum, 21, 139, 140, 141  
 Longquan, China, 102, 103, 105, 107, 109, 128  
 Maʿdin, Afghanistan, 118  
 Maḥmūd b. Aḥmad al-Kūsī, 15  
 Mahra, *see* Land of Mahra  
 Majapahit, Giava, 101  
 Mamluks (1250-1517), 120  
 Manjū, *see* Minjuids  
 Manqabād, Egypt, 50  
 al-Manṣūr ʿUmar I (r. 1229-1250), 15  
 al-Manṣurā / Mansura / al-Manṣūrah, Dhofar, 4, 8, 15, 31, 149  
 Marbato, *see* Mirbāt  
 Maria Theresa (r. 1740-1780), 122  
 al-Masʿūd Yūsuf (r. 1215-1229), 8, 15  
 Mecca, 6, 17, 138  
 Mexico City, 107  
 Míng (1368-1644), 4, 89, 103, 104, 106, 107, 108  
 Minjuids / Manjū / Manjawīyyūn / Minjui, 4, 7, 9, 15, 16, 21, 31  
 Mirbāt / Morbat / Morbat / Marbato, Dhofar, 3, 4, 5, 12, 13, 15, 26, 70, 137, 139, 141, 145, 150  
 Mombasa, Kenya, 70  
   Fort Jesus, 70  
 Mongols (1206-1634), 104  
 Moresby, R. (1794-1854), 5  
 Mughal (1526-1858), 121  
 Muḥammad b. Abī Bakr b. Saʿd, 21  
 Muḥammad b. ʿAlī, 141, 142  
 Muḥammad b. Aḥmad al-Manjawī, 15  
 Muharraḡ, Bahrain  
   Pearling Site Museum, 68, 75  
 al-Mukha, Yemen, 84  
 Muscat, Oman, 1, 122, 126, 129  
   Italian Embassy, 1  
   Ministry of Heritage and Tourism, 1, 24, 127  
   Ministry of National Heritage and Culture, 23, 53, 150  
   National Museum of Oman, 21, 104, 105, 106, 112, 127  
   Office of the Adviser to His Majesty the Sultan for Cultural Affairs, 1, 24, 47, 53, 117, 127, 131, 134, 136, 151, 152  
   Sultan Qaboos University, 17, 137, 151  
 al-Mustanṣir (r. 1226-1242), 15

- al-Muẓaffar Yūsuf I (r. 1250-1295), 15, 16, 18, 119, 123
- Myanmar / Martaban, 102, 107, 110
- Nabīla bint al-Muẓaffar Yūsuf I, 18
- Nagasaki, Japan, 106, 107
- Nanfeng, China, 103
- al-Nāṣir Aḥmad (r. 1400-1424), 120
- Naṣr II (r. 914-943), 118
- Nelli, N. (ca. 1533-1575), 4
- Nizwa, Oman, 127
  - Oman Across Ages Museum, 127
- Nufa (Zafār), Dhofar, 4, 104
- Ortelius, A. (1527-1598), 4
- Ottomans (late 13<sup>th</sup> c.-1924), 31, 106, 120, 121
- Owen, W.F.W., 5
- Oxford
  - Ashmolean Museum, 121
- Paris
  - Bibliothèque nationale de France, 4
- Pedra Branca, Singapore, 106, 107, 114
- Persian Gulf, *see* Gulf area
- Philippines, 106
- Pisa
  - University of Pisa, 81, 152
  - University of Pisa, Department of Structural Engineering, 25
- Polo, M. (1254-1324), 4, 67, 120
- al-Qāhira, Dhofar, 4, 8, 15
- Qal‘at al-Baḥrayn, 101
- Qalhāt, Oman, 1, 8, 12, 85
- Qing (1644-1911), 31, 89, 104, 105, 108, 128, 133
- Quanzhou, Cina, 104, 129
- al-Qūf, Dhofar, 137, 138, 140
- Quṣeir al-Qadīm, Egypt, 67, 70
- Ramusio, G.B. (1485-1557), 4, 13
- Rā’s Aḥmar / Rās el Ahmar, Oman, 6
- Rā’s Fartak / Fartaca, Saudi Arabia, 4, 13
- Rā’s Fartarsh, Saudi Arabia, 5
- Rā’s al-Khayma, United Arab Emirates, 87, 89
- Rā’s Sukra, Oman, 6
- Rassids (Zaydi Imams of Yemen; 897-1962), 117
- Rasūlids (1228-1454), 12, 15, 16, 17, 18, 21, 30, 31, 104, 107, 117, 118, 119, 120, 121, 122, 142
- Raysūt / Risūt, Dhofar, 3, 4, 5, 12, 30
- Red Sea, 5, 68, 70, 106
- al-Ribāt / Robot, Dhofar, 4, 5, 6, 7, 8, 9, 16, 18, 19, 21, 22, 137, 138, 139, 140, 141, 142, 145, 149
- Rome
  - International Association for Mediterranean and Oriental Studies, 137
  - Ministry for Foreign Affairs and International Cooperation, 2, 137
- Ruqaiyat bint ‘Amr b. Ja‘far b. ‘Amr b. Badr Bū Ṭwayriq, 140
- Sadana Island, 106
- Ṣaḍḥ, Dhofar, 26
- Safavids (1501-1722), 89, 121, 128
- Ṣāḥib al-Ḥadra, 138
- Ṣalālāh / Ṣallālāh / Silalāh / Solahlāh, 2, 3, 6, 16, 18, 24, 25, 26, 28, 68, 81, 84, 90, 121, 127, 129, 137, 138, 142, 143, 149, 150
  - Land of Frankincense Sites Department, 2, 24, 118
  - The Museum of Frankincense Land, 19, 20, 24, 71, 118, 120, 121, 127, 128, 129, 131, 132, 133
- Ṣalālāh Gharbiyya, 137, 140
- Ṣalūt, Oman, 128
  - Archaeological Gallery, 128
- Sāmānids (819-1005), 118
- Samarkand, Uzbekistan, 118
- Saudi Arabia, 70
- Saunders, J.P., 6, 7
- Sawankahalok, Thailand, 106
- Sayf b. Sulṭān (r. 1692-1711), 122
- Seiyun, Yemen, 137
- Sharma, Yemen, 84, 103, 106
- Shibām, Yemen, 15, 17, 31
- al-Shiḥr, Oman, 4, 121
- al-Shiṣr, Oman, 118, 119, 122, 128
- Singapore, 106, 114
- Sīrāf, Iran, 15, 31, 88, 104
- Smith, J.S. (d. 1796), 5
- Socotra, 4
- Somalia, 121
- Song (960-1279), 103, 120, 129, 136
- South Arabia, *see* Arabia
- South Asia / Southeast Asia, *see* Asia
- Sub-Indian continent, *see* India
- Ṣuḥār, Oman, 11, 103, 104
- Ṣulayḥids (1047-1138), 117
- Sulaymān II b. Salīm I, the Magnificent (r. 1520-1566, Ottoman sultan), 121, 125
- Suleyman I, *see* Sulaymān II b. Selīm I
- Sultanate of Kilwa, *see* Kilwa
- Sumhuram, Oman, 23, 127, 128
- Syria, 47, 82
- Ṭāḥirids (in Yemen, 1454-1517), 120, 121
- Ta‘izz, Yemen, 16
- Tang (618-907), 129
- Tanzania, 104, 119, 121
- Ṭāqa / Thaàkah, Dhofar, 6, 26
- Taymūr b. Fayṣal (r. 1913-1932, sultan of Muscat and Oman), 122, 126
- Thailand, 102
- Tihama, Yemen, 84, 87, 98
- Tübingen, Germany, 119
- ‘Umar I (r. 1229-1250), 15
- Umayyads (661-750), 16
- United States, 127
- Uzbekistan, 118
- Vietnam, 102

Virginia, 127, 150  
Wādī Dawka, Oman, 23, 128  
Wadi Gawasis, Red Sea, 70  
Wādī Hadramawt, *see* Hadramawt  
Wanli (1573-1620), 105  
Washington  
    National Museum of Asian Art, Smithsonian  
    Institute, 127  
al-Wāthiq, *see* Ibrāhīm b. Yūsuf  
Wubār, Dhofar, 23, 128  
Xuanzong (r. 1425-1435), 105  
Yāqūt al-Hamawī, Shihāb al-Dīn (1179-1229), 3  
Ya‘rubids (1624-1749), 89, 122  
Yemen, 1, 2, 15, 16, 17, 20, 21, 31, 67, 82, 84, 87,  
    88, 89, 90, 98, 117, 118, 119, 122, 123  
Yuan (1279-1368), 103, 104  
Zabīd, Yemen, 87, 90, 117, 119, 121, 125  
Zafār / Zafār I, Yemen, 117, 118, 123  
Zaydi Imams of Yemen, *see* Rassids  
Zhangzhou, China, 104, 106  
Zhao Rugua (1170-1231), 4, 104  
Zhejiang, China, 102  
Zheng He (1371-1435), 104  
Ziyādids (818-1018), 117  
Zuray‘ids (1080-1175), 117