

THE UNIVERSITY OF MANITOBA

SKELETAL REMAINS AND SOCIO-ECONOMIC IMPLICATIONS OF
MORTUARY PRACTICES AT QSAR ES-SEGHIR, MOROCCO

by

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A dissertation submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
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2) Debrouca	Double possible name (?)
3) Dacosta M	Dacosta W
4) Ollier q Foi	Wife who (abb.) was
5) Dariq de	of Enrique (abb.) de
6) Sousa	Sousa
	66
5. Tombstone #6	Translated:
Line 1) Aqui Jas--	Here lies??
2) Foi Mate(us)?	Was Mateus - (name)
3) gg3 P eg--	(?)
4) (?)	(?)
5) ?ego ll Mato (?)	name? ll died
6) (in crescent)	the year of our
--AG D 1544	gracious Lord
7) Anito	year
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2) Don AF-DE	Don Affonso (Abb.) De
3) Olanda--	Olanda??
4) -AG-AG-	abbreviations - perhaps
	Anno Gracia Domini
5) 1544	1544
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INTRODUCTION

Qsar Es-Seghir is a medieval Portuguese fortress located between Tangier and Ceuta, Morocco on the Straits of Gibraltar. (Lat. 35° 52' North, Long. 5° 34' West).

The site has been under investigation since 1974 as "an interdisciplinary research project concerned with general problems of history during the 12th to 16th centuries" (Redman 1976:1).

Information from historic documents and archaeological work done suggests that there were three major occupational phases at Qsar Es-Seghir, as follows (after Redman 1976:5-9):

Early Islamic	AD 700 - 1280
Late Islamic	AD 1280 - 1458
Portuguese	AD 1458 - 1550

In 1458, the beginning of the Portuguese period, the city of Qsar Es-Seghir underwent a massive rebuilding and modification period evidenced through the archaeological and historical records (Redman 1975, Schulman 1979). Consequently the large congregational mosque was purified, rededicated, and converted into a Christian church. During this time the church floor and an area northwest and adjacent to the church, 'the cemetery,' were used extensively by the Christian Portuguese for interment. These two areas, the church and the cemetery, and the skeletal remains within them, will be the focus of this thesis.

The skeletal remains from Qsar Es-Seghir are the first to be excavated from this period of Moroccan history and, because of the paucity of comparative Medieval skeletal material from the "Iberian States," the

first goal of this study is to present a description of the skeletal remains.

Secondly, an attempt will be made to demonstrate that the general morphology of the two skeletal groups, church and cemetery, differs in size and that this size difference is a direct result of socio-economic factors existing between the groups.

To test this hypothesis, a Student's t-test was employed, comparing the mean scores of skeletal measurements and selected indices derived from these measurements, that reflect size and shape (Bass 1971, Olivier 1969).

CHAPTER I

SITE HISTORY

The site of Qsar Es-Seghir lies in a valley beside an outlet of the river Oued Qsar Es-Seghir, which empties into a natural harbor. This natural harbor is located at the narrowest point of the Straits, only twenty-three kilometers from the coast of Spain and the modern city of Tarifa, making it a favorable spot for trade and other activities between Spain and Morocco. The modern village of Qsar Es-Seghir is located on the opposite bank of the river, overlooking the harbor.

The site of Qsar Es-Seghir is a small city enclosed by a large circular stone wall and moat, measuring approximately 200 meters in diameter. The moat and wall are connected to a large fortified area, the citadel, which surrounds an earlier Islamic city gate. From this fortress extends a walled corridor that runs along its river side onto the beach (Figure 1). The walls and Islamic city gate were constructed in 1289 while the moat, corridor, and other fortifications were built by the Portuguese after 1458 (Schulman 1979) (Figure 2).

Within the circular city walls are the remains of Islamic buildings constructed of brick and stone dating from about AD 700 to 1458. Portuguese cut stone and mortar structures dating from AD 1458 to 1550 are superimposed on the Islamic remains. The preservation of the city structures is excellent as the site was not reinhabited after the Portuguese abandoned it in 1550 (Redman 1976, Schulman 1979).

A large number of artifacts has been uncovered from the three levels

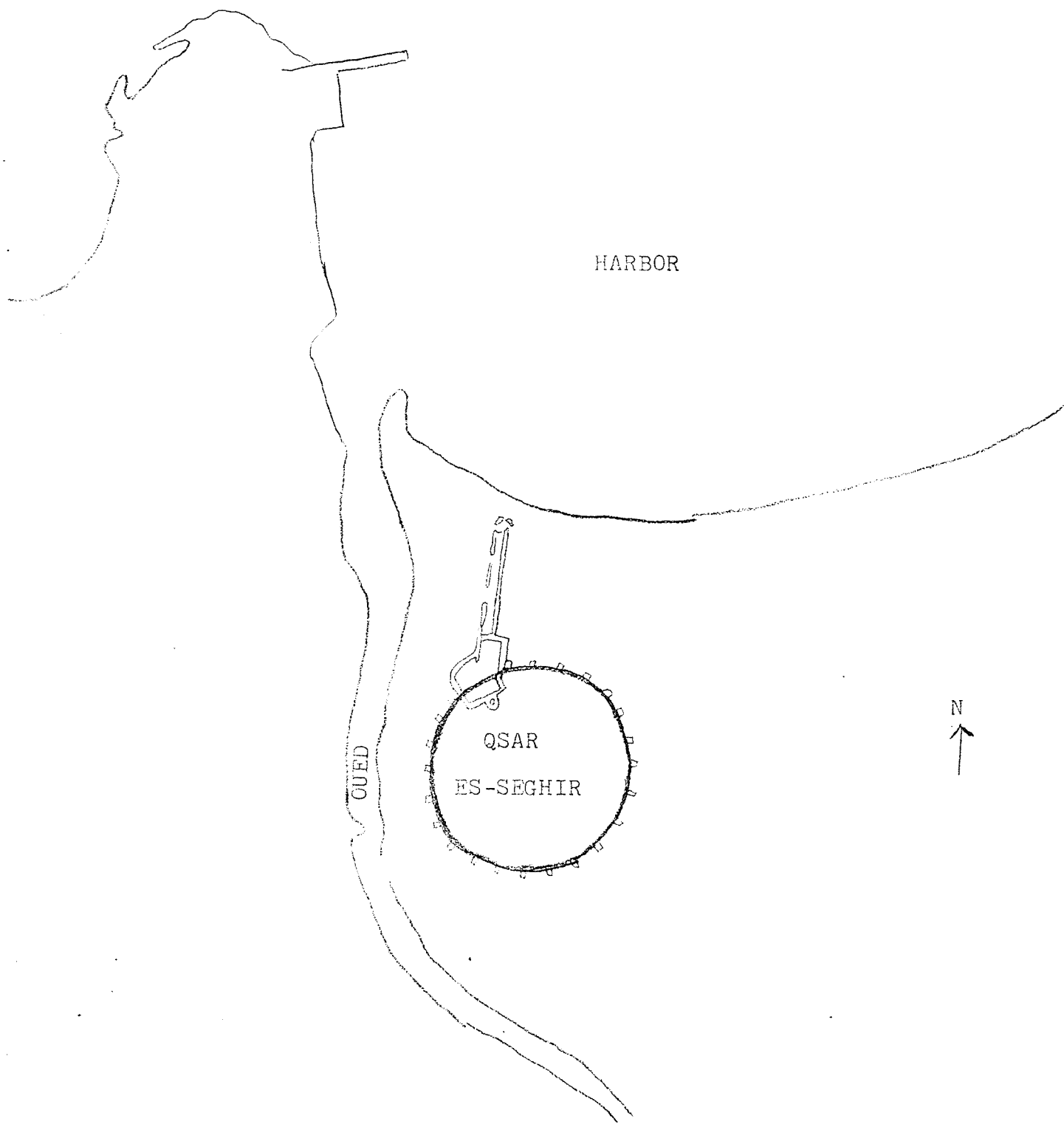


Fig. 1. Map showing the walled city of Qsar Es-Seghir
Scale 1/5000

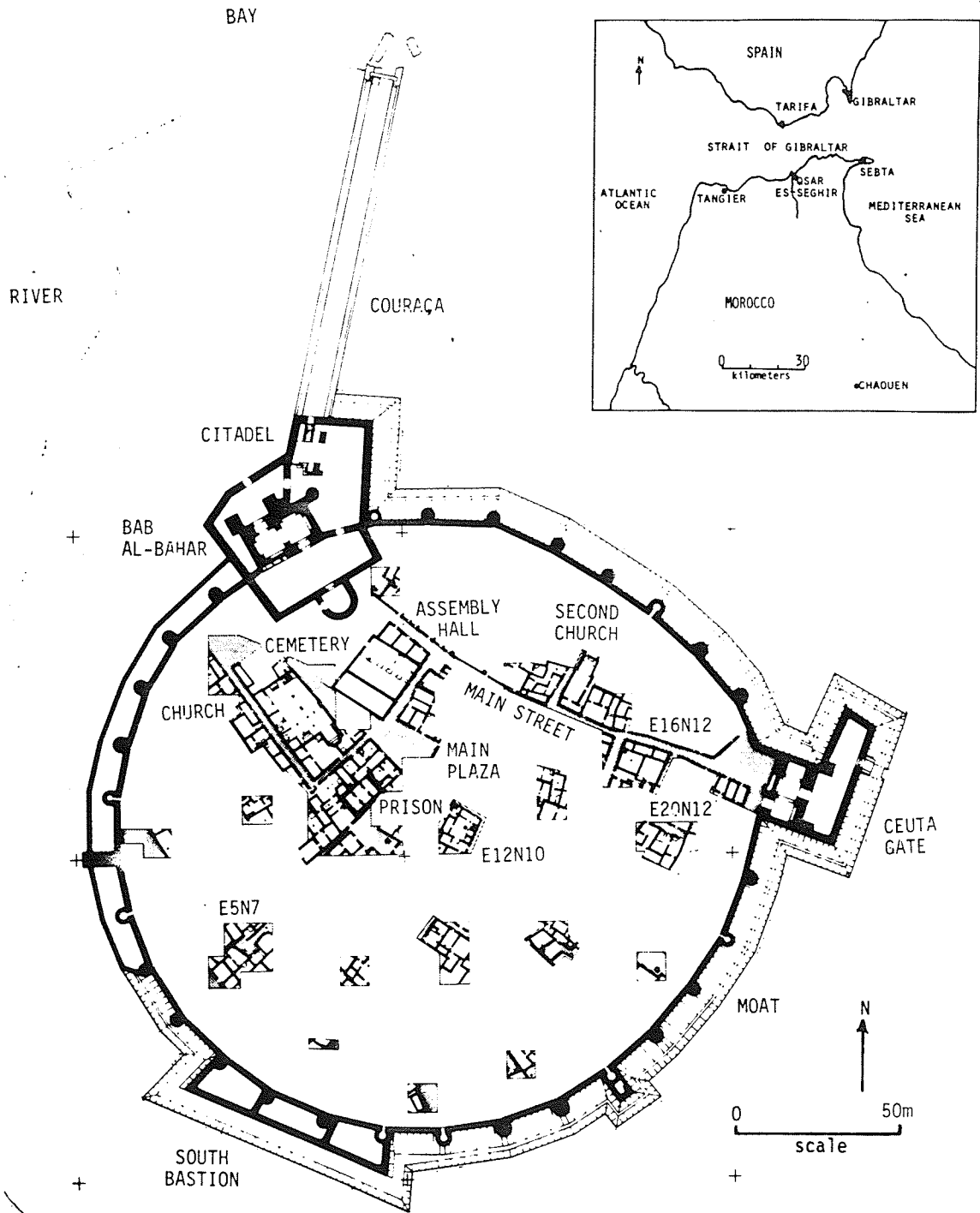


Figure 2. Walled city of Qsar Es-Seghir showing excavated areas.

of Islamic and Portuguese phases. These include pottery, glassware, coins, and various armaments. Domestic implements such as knives, scissors, shovels, axes, and nails have also been recovered in large quantities. The artifactual inventory is quite large and varies considerably between the Islamic and Portuguese occupations. Pottery from the Islamic levels was varied in style and was generally multicolored, having geometric patterns and designs. Portuguese pottery tended to be more standardized, with large quantities of plainware or, if glazed, with monochrome glazes. Coins were abundant in the Portuguese levels, occurring in small caches, but not so numerous in the Islamic ones. Large inventories of iron swords, daggers, armor and nails were recovered from the Portuguese levels not contained in the Islamic.

The most interesting difference between Islamic and Portuguese occupations was not in the artifacts but in the physical arrangements of houses and space dictated by the city's circular walls. Islamic levels were characterized by relatively few open public areas, small narrow streets with unpretentious house facades. Portuguese levels stressed open areas, streets were more uniform and generally cobbled, and houses were more decorative, having carved lintels and window borders.

EARLY ISLAMIC (AD 700 - 1280)

The earliest historical reference to the site is mentioned by the writer Al-Baki, who calls the city Qsar Al-Awwol, or "the first castle." This is one of several names given to the city throughout the Middle Ages.

Prior to AD 700 the city probably existed as a small relatively inactive port, participating in limited trade in the Mediterranean. It is possible that Phoenicians and Romans occupied the area before the

Muslims, but evidence of these earlier settlements within the city wall of Qsar Es-Seghir has not been substantiated by excavation.

In AD 711 Tariq Ibn Ziyad embarked from the port, which was then known as Qsar Masmuda, named after a tribe inhabiting the area, to begin the first Muslim conquests of southern Spain.

Between AD 1180 and 1280 the site became a prominent economic and military center. The Almoravid (1056 - 1147) and Almohad (1130 - 1269) dynasties of Morocco used the city as a departure point for their military invasions into Spain. Large Islamic armies passed through and occupied the city periodically, thus contributing to its economy and importance.

During the second half of the 13th century the Marinids (1296 - 1470) gained control over Morocco and used the city as an embarkation point for crossings into Spain. Abu Yusuf Ya^Cqub (1286 - 1307), a Marinid ruler, crossed the Straits four times from Qsar Masumda between AD 1275 and 1285. At this time the site was renamed Qsar Al-Majaz, or "castle of the crossing." It was not until the 14th century, when it diminished in importance, that Qsar Al-Majaz was again renamed, and became known as Qsar Es-Seghir, or "small castle."

Throughout this early period of occupation, Qsar Es-Seghir was an active and prosperous town, busy supplying and trading with the Moroccan armies that passed through on their way to Spain to fight the "Reconquista." Its prosperity and importance fluctuated periodically with both the political and economic conditions of the ruling dynasties.

LATE ISLAMIC (AD 1280 - 1458)

In 1289 the monumental gates and city walls were built for the glorification of Allah and as a defense against Christian advances from Spain (Schulman 1979).

In 1291 the Christians captured the city of Tarifa located across the Straits opposite Qsar Es-Seghir, and discouraged any further Marinid invasions against the Reconquista. Thus began a period of military decline and loss of revenue for Qsar Es-Seghir. Despite this, the inhabitants of Qsar Es-Seghir adapted to other means of livelihood. Weaving became the major activity, bringing them fame as producers of fine linen (Schulman 1979). The site may also have served as a small trade and fishing center supplying products to southern Spain and Granada. More importantly, Qsar Es-Seghir became a stronghold for pirates who raided and disrupted shipping in the Straits (Schulman 1979).

PORTUGUESE (AD 1458 - 1550)

From the late 14th century to the early 15th century Portugal became actively involved in the Crusades against the "Infidels" of the Iberian Peninsula. This necessitated control of the Straits and the establishment of ports along the coast of Africa, and the beginning of their expansion and conquest to areas in northern and sub-saharan Africa.

Portugal organized several campaigns against North Africa, with varying degrees of success. The first of these began in 1415 with the capture of Ceuta, another port city along the coast to the east of Qsar Es-Seghir. After its capture, further Portuguese expansion in Morocco was halted for financial and political reasons, leaving Ceuta isolated and dependent on outside supplies and aid from Portugal for its existence.

It was not until twenty-two years later that Portuguese expansion into Africa was resumed. In 1437 Prince Henry and his brother Fernando, commanding a force of 6000 men, sailed from Portugal to capture the port city of Tangier (Schulman 1979). By gaining control of Tangier, Portugal hoped to monitor shipping within the Straits more effectively and at the

same time give much needed support to Ceuta. It was also hoped that the crown's wealth, at this time very much depleted, would be increased with the capture of Tangier.

The assault on Tangier took place on September 13, 1437 (Schulman 1979), and was a failure. Fernando was taken hostage and the defeated Portuguese army returned home. It was not until 1453, with the fall of Constantinople, that Portugal again became involved with expansion into Morocco. In response to Constantinople's fall, the reigning King of Portugal, Alfonso V, ordered preparations for a crusade against the Turks. This plan was abandoned in favor of an expedition closer to home. Tangier was considered, but put aside in favor of Qsar Es-Seghir, which would provide a military base for future expansion in Africa and increase Portugal's security on the Straits.

Qsar Es-Seghir, the closest port to Ceuta, was directly involved in the numerous attacks made against Ceuta by Salah Ibn Salah, who ruled the coastal region. The location of Qsar Es-Seghir being at the narrowest point of the Straits, made it a convenient place from which to attack Portuguese vessels travelling to and from Ceuta.

King Alfonso set sail from Setubal on Saturday, September 30, 1458 (Schulman 1979), stopping at various ports along the way to collect other troops, expanding his army to a force of some 25,000 men.

On the following Monday, October 2, they arrived at Qsar Es-Seghir, where they were met by Muslim cavalry and foot soldiers. Following a bloody battle and heavy bombardment of the city, the Muslims were forced to surrender.

The inhabitants were allowed two days to evacuate the city. On Wednesday, October 18, 1458, Alfonso and his army entered the city. The

King went directly to the central mosque, purified it, and converted it into a Christian church. The church was dedicated as the Church of Santa Maria da Misericordia, and placed under the parish of Santa Maria D'Africa, which in turn was in the charge of the military 'Order of Christ' in Portugal. This military order was headed by Prince Henry the Navigator (Schulman 1979). On September 19, 1460, Lopo Alfonso was appointed the first vicar to head the congregation.

A few days after the capture of Qsar Es-Seghir, King Alfonso departed for Ceuta, leaving a garrison of troops behind to rebuild and fortify the city. Before his departure he appointed Dom Durarte de Meneses as the first military governor of the city. The actual number of men left is disputed but, based on later evidence and the size of the fortress, the garrison probably numbered no more than 400 men (Schulman 1979).

The Sultan of Morocco, hearing of Qsar Es-Seghir's fall, sent an army of 2000 men to recapture it on November 8, 1458. The Portuguese, being better armed and trained in warfare, took a heavy toll of the Muslim forces. The Muslim army consisted of untrained volunteers, many without weapons, coming to participate in the 'Holy War.' Once their supplies ran out they deserted and returned home, thus ending the siege.

A second siege was launched in early July of 1459. The Muslims, running short of supplies, ended the siege on August 24, 1459. The Portuguese, having just completed the walled corridor to protect transportation of outside supplies coming from the beach, were able to withstand the second siege.

The city was not seriously threatened again and the Portuguese continued their occupation for another ninety-two years until abandonment in 1550.

During the Portuguese occupation the city was rebuilt and greatly modified. Islamic houses were knocked down and the debris used for remodeling of structures according to traditional Portuguese tastes. Housing units were subdivided and walls reconstructed with coarse, irregular rocks held together with poor quality mortar. Fragments of bricks, roofing tiles, and pottery were often used for chinking. The larger and more important buildings and walls were constructed from cut stone, which was sometimes also used as cornerstones for houses. Stone door jambs and lintels of important buildings and the wealthier houses were occasionally carved with decorative designs.

Larger areas of the residential part of the city were paved over with flagstones and cobbles, emphasizing public space to a greater degree than did the Muslim layout of the town. The center of the town remained the same as in the Islamic occupation, focussing around the mosque, now a church, and hamman (public bath).

The main effort of reconstruction concentrated initially on the fortifications. A moat was built around the city and the Islamic gates were filled in and surrounded by thicker defense walls. A sloping glacis was constructed against the outer city wall. The walled corridor was also built at this time to facilitate movement of incoming supplies from the beach to the city.

The Islamic community was divided into quarters, each centered around one activity, with most commercial business taking place in the central market area. Archaeological evidence shows that the Portuguese settlement was composed of numerous residential areas centered around open cobbled plazas connected by paved streets. Within these plazas were commercial centers for production and sale of everyday items such as

household goods, pottery, bread, etc., while the central market dealt with imported food and manufactured goods (Redman 1979).

Portuguese colonies, especially those in Morocco, were initially primarily military garrisons, later becoming more diversified as communities. They were organized along both civil and military lines. The military included soldiers and higher ranking officials appointed by the king or by the captain of the garrison. Only these ranking military positions were generally given to members of the upper class, who also held important civil positions as judges, notaries, accountants, scribes, and doctors. Likewise church officials were generally from the upper class. Those of more humble origins were relegated to domestic positions as maids, servants, farmers, and tradesmen.

Civil servants and soldiers were paid in cash and by a food allowance. Compensations varied in amount and type of food according to the position held. For the captain of Tangier in the year 1472, the following amounts were provided:

68,568 reais (an old Portuguese coin equal to about one cent) in cash plus a food allowance of 62,920 reais which broke down as follows: 15 reais per alquiere (1 - 13 dry liters of wheat); 1000 reais for each cask of wine equal to 52 almudes (approximately 215 liters); 27.5 reais per arroba (approximately 32 pounds of meat; 4 reais and 7 pretos (a smaller copper coin) per fish;.....
.....
The captain also received one-fifth of the booty captured by his men (Schulman 1979:149).

These payments diminished with decrease in rank.

The combatants, both on horse and on foot, received 100 reais per month: crossbowmen on horse received 70 reais, while those on foot, 50; Artillery-men and musketeers, 300; spies, 200; and sentinels, 100. All received four alquieres of wheat, 17 liters of wine, one arroba of meat, and 2.5 of fish (Schulman 1979:151).

The majority of the population of Qsar Es-Seghir consisted of moradores

or inhabitants who doubled as combatants when needed. When not engaged in combat they generally filled the following occupations:

Pharmacist	-	4000	reais
Blacksmith	-	2000	reais
Carpenter	-	2000	reais
Mason	-	2000	reais
Town Crier	-	3600	reais
Foreman	-	2000	reais
Shipwright	-	2000	reais

(Schulman 1979:151).

CHAPTER II

EXCAVATION SAMPLE

CHURCH

One hundred and ninety-six burials were uncovered between 1976 and 1978, fifty-two from within the precincts of the church and one hundred and forty-four from the cemetery.

In 1975 excavation of the church was completed. The church was one of the largest buildings contained within the city wall, measuring 20m x 15m square. Contained within it were several chapels, one large ceramic tiled chapel at the front of the church and three smaller side chapels running along the west wall (Figure 3). Two of the smaller side chapels were decorated with religious paintings. The main chamber of the church was partially paved with large, cut stone slabs, used as a floor surface and as gravemarkers for burials.

The stone slabs vary in size from 25cm square to several of more substantial dimensions, measuring 1m x 2m. Six of these larger markers were inscribed, some with names and dates (see Appendix II, Plates 4, 5, 6 and 7), and one with a raised carved 'death mask.'

Because of the limited time for excavation and the large number of grave markers contained within the church, it was necessary to divide the church into four quadrants and from each quadrant randomly select stones to be lifted (Figure 3). Two markers were raised in 1977, a blank one from quadrant 1 and the other an inscribed one from quadrant 4. A total of ten such tombstones were lifted and excavated, five inscribed and five blank.

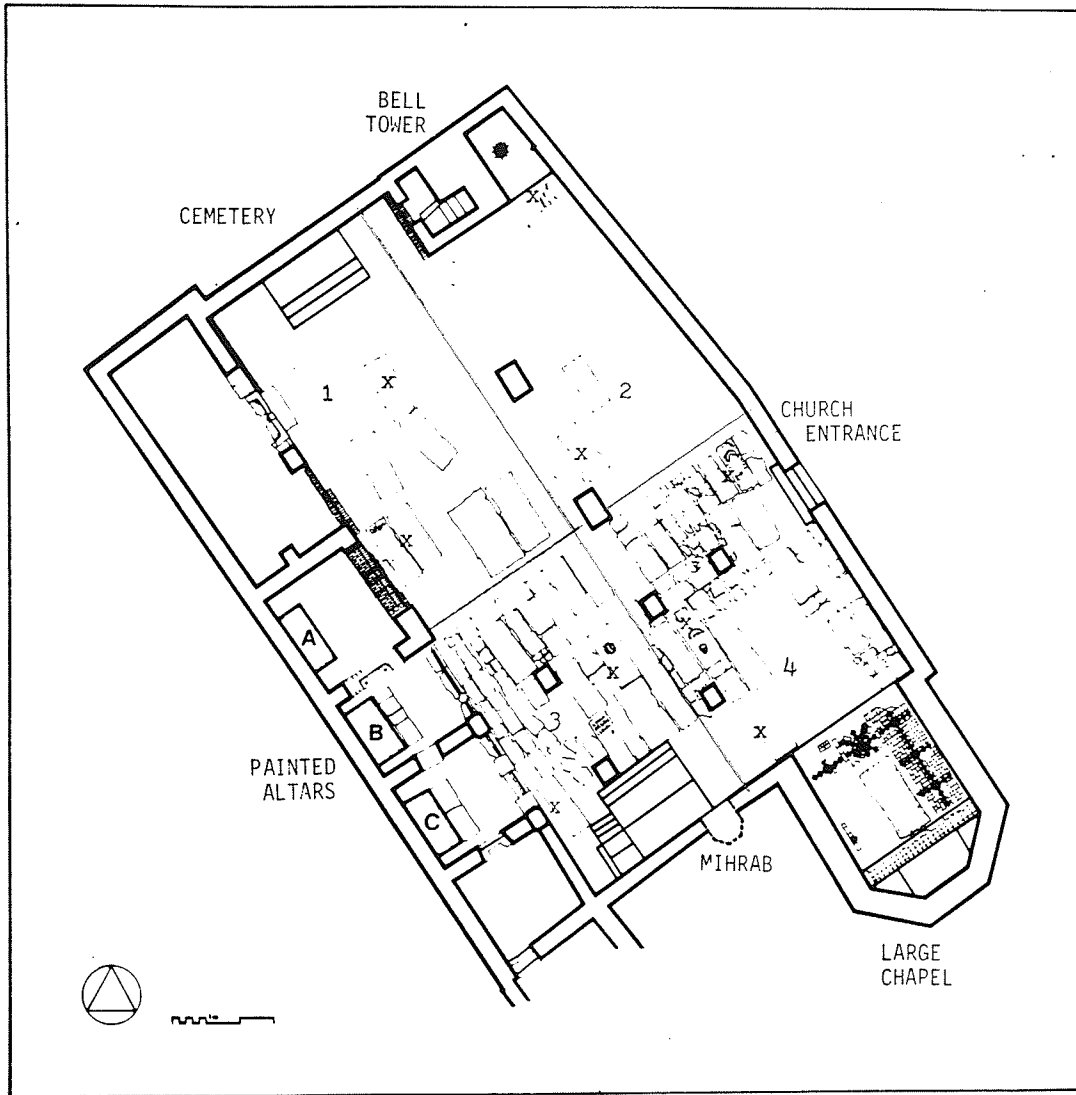


Figure 3. Interior of church.

In 1978, eight additional stones were selected, two from each of the four quadrants, one inscribed and one blank. Blank stones were randomly selected (Redman 1974), one per quadrant. All inscribed stones were evenly distributed, one per quadrant, with the exception of two occurring in quadrant 3, of which one was lifted. In quadrants 1 and 4, where stones had been previously lifted in 1977, two additional ones were selected. Thus, these quadrants contained three lifted stones rather than two as in quadrants 3 and 2.

CEMETERY

Outside the church, extending from its back wall for approximately twenty meters toward the northwest, is the cemetery containing dense interments. This area was also examined and partially excavated. The density of interments and the time involved in their excavation did not permit investigation of the entire 400 square meter area. Only 50 square meters were actually dug, all to sterile soil. Because of cobbled streets and a plaza on the remaining sides of the church, and problems arising out of their excavation, the cemetery was the only exterior area examined, although burials did extend under these surfaces.

EXCAVATION TECHNIQUES AND PROBLEMS

The cemetery and church were both used for interment over a period of 92 years, with the cemetery being more extensively used than the church. Burials occurring in the cemetery were more numerous and dense, with later graves repeatedly cutting into earlier ones. The interments uncovered beneath the church tombs were not quite as numerous nor as dense as those in the cemetery. Burials under church tombstones contained layers of soil between most skeletons. This made the approach to and

interpretation of stratigraphy easier in the church than in the cemetery, where burials were more dense.

When burials were excavated within each section of the cemetery care was taken to expose only the uppermost skeletons. This was often difficult due to the merging of lower burials with upper ones. Once the upper skeletons were recorded and photographed, they were removed and the next level exposed until the section was completed.

The problems of stratigraphy were intensified by the fact that the depth to which burials could extend was limited by sea level, which was only two to three meters below ground level. Burials next to the church were even more restricted by a large brick floor extending out from the wall (part of the older mosque) occurring only one meter from the surface. Skeletons were placed directly on the floor and then stacked one upon the other. No attempt was made to go beyond this brick floor either by the Portuguese or myself.

Within the church, burials were concentrated beneath each tombstone but with intervening levels of soil, making the stratigraphy easier to interpret.

FIELD METHODS

The methods employed in the excavation of the burials were as follows:

- 1) The burials were exposed, cleaned, photographed, labelled, and removed to the laboratory.

- 2) Stratigraphic controls were used whenever the admixture of the soil was not extreme and the intrusion of later graves into earlier ones had not occurred with great frequency.

3) All loose and unassociated bones were collected from each level and section and brought to the laboratory.

4) All grave fill was separated and screened through a 0.5 cm mesh screen.

5) Excavations were supplemented by photographic and written records.

LABORATORY METHODS

Once burials were removed from the ground and brought to the laboratory, thirty-seven cranial and twenty-nine post-cranial measurements were taken. Measurements used are listed in Tables 1 and 2 and are described by Bass in Human Osteology, (1971). Those marked by an asterisk are outlined by Olivier in Practical Anthropology, (1969). These measurements were chosen as they are the most generally accepted and frequently used. All measurements were taken by sliding and spreading calipers, osteometric board, mandibulometer, and tapes.

The twenty-one indices computed from the above measurements are listed in Table 3, (Bass 1971, Olivier 1969). Stature was assessed using Trotter and Gleser's 1958 regression formulae for white males and females.

Loose and unassociated bones were examined for pathologies and measurements taken when possible, but these data will not be included in this report.

TABLE 1

CRANIAL METRICS

1. Maximum Cranial Length	15. Maxillo-Alveolar Length
2. Maximum Cranial Breadth	16. Maxillo-Alveolar Breadth
3. Basion-Bregma Height	17. Internal Palatal Length
4. Basion-Prosthion Length	18. Internal Palatal Breadth
5. Minimum Frontal Breadth	19. Biasterionic Breadth
6. Basion-Nasion Length	20. Nasion-Bregma Chord
7. Total Facial Height	21. Bregma-Lambda Chord
8. Nasion-Prosthion Height	22. Lambda-Opisthion Chord
9. Bizygomatic Breadth	23. Frontal Arc
10. Nasal Height	24. Parietal Arc
11. Nasal Breadth	25. Occipital Arc
12. Left Orbital Height	26. Foraminal Length*
13. Left Orbital Breadth	27. Foraminal Breadth*
14. Biorbital Diameter*	28. Maximum Cranial Circumference

MANDIBLE

1. Bicondylar Breadth	6. Ramus Height (vertical)
2. Minimum Ramus Breadth	7. Ramus Height (angular)
3. Bigonial Breadth	8. Mandibular Angle
4. Symphyseal Height	9. Mandibular Length
5. Body Length	

TABLE 2
POST-CRANIAL METRICS

HUMERUS

1. Maximum Length
2. Physiological Length
3. Maximum Shaft Diameter
4. Minimum Shaft Diameter
5. Maximum Head Diameter
6. Mid-Shaft Circumference*
7. Bicondylar Breadth

FEMUR

1. Maximum Length
2. Physiological Length
3. Maximum Head Diameter
4. Mid-Shaft Anterior-Posterior Diameter
5. Mid-Shaft Medial-Lateral Diameter
6. Mid-Shaft Circumference*

ULNA

1. Maximum Length
2. Physiological Length
3. Mid-Shaft Circumference*

TIBIA

1. Maximum Length
2. Physiological Length
3. Condylar Breadth
4. Maximum Mid-Shaft Diameter
5. Minimum Mid-Shaft Diameter
6. Mid-Shaft Circumference*

RADIUS

1. Maximum Length
2. Physiological Length
3. Head Diameter
4. Mid-Shaft Circumference*

FIBULA

1. Maximum Length

CLAVICLE

1. Maximum Length
2. Mid-Shaft Circumference*