



**AYLA**  
**Art and Industry in the**  
**Islamic Port of Aqaba**

by  
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scene in the movie "Lawrence of Arabia"

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## **AYLA**

### **Art and Industry in the Islamic Port of Aqaba**

Donald Whitcomb

Few images are so powerfully romantic as the scenes from the movie "Lawrence of Arabia" when the Sharifan army sweeps down the Wadi Arabah, passes the pitiful Turkish batteries, and reaches the graceful curve of the gulf and the sleepy village of Aqaba. These events took place on July 6, 1917, yet there seems a timeless quality to this drama, one equally evocative of the heroic dash of great events in many periods. The scene of Aqaba village also partakes of this abstract quality; the village filmed is *not* Aqaba but one located somewhere else, almost anywhere else, on the coast of the Mediterranean Sea or Indian Ocean. The scene and the action are icons of the history and settlement of the Middle East. What follows in this description of medieval Aqaba, then known as Ayla, is an exposition of some historical details, elements that embrace the timeless setting of human life and the specific events that are enacted in this scenery from time to time.

Aqaba was not always a sleepy village but was, once upon a time, a city. Not a great metropolis or even an urban center, but rather, one of the many concentrations of population with religious and administrative activities that are key elements in a civilized society. Like many older cities of the ancient Near East, such places frequently failed to attract much historical attention and, in the absence of written accounts, their history has been forgotten, but not lost: archaeological research can uncover these cities and provide a context for reconstructing their history. Medieval Aqaba was lost and its story forgotten, but modern excavations, and studies such as those recounted here, are a beginning toward remembrance of this timeless place.

The modern city of Aqaba is the only port of the Hashemite Kingdom of Jordan. It lies in the northeastern corner of the Gulf of Aqaba, an extension of the Red Sea. The Red Sea, the Gulf of Aqaba, and the long, flat valley of the Wadi Arabah leading to the Dead Sea are all sections along the Great Rift Valley, which is the longest and

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deepest geological fault in the world. On the west are the mountains and deserts of the Negev and the Sinai; on the east are the mountains and deserts of the Hijaz. Subterranean waters run down the Wadi Arabah and enter the sea beneath the modern town. This plentiful water has made Aqaba an oasis by the sea; it is a place of gardens and palm trees between the dry deserts and mountains and the salt sea.

**Archaeology and Ayla**

This presentation is not intended as a full account of the results of the University of Chicago's excavations at Aqaba, which were the subject of the 1988 exhibition and booklet entitled "Aqaba: Port of Palestine on the China Sea." As fascinating as this evidence and its recovery have proven, potsherds and holes in the ground do not tell the whole story. Archaeology is not simply digging and discovery but observation, interpretation, and understanding.

As an example, take the case of Muqaddasi, a scholar of the late tenth century, who wrote a detailed account of all the cities of the Islamic world. In his description of Ayla, which must have been based on a personal visit, he states:

[The city] is usually called Ayla,  
but [the true] Ayla is in ruins nearby ...



This observation qualifies Muqaddasi as the first archaeologist to attempt to understand the history of settlement at Aqaba. Only in 1987, a full millennium after he wrote, did it become clear that this scholar stood in the medieval town and looked northwest toward the ruins left by the Nabataean, Roman, and Byzantine settlements.

These ancient places became ruins, just as the living town visited by Muqaddasi was gradually buried in the sands. In 1914, a young archaeologist by the name of T. E. Lawrence described Ayla as "an Arab settlement of some luxury in the early Middle Ages." The ruins of Ayla remained buried for another seventy years until the author, having read Lawrence and Muqaddasi, found a few sherds and stones in the featureless sand. Some test trenches in 1986 indicated the rich potential of the site, a prediction confirmed in the large-scale excavations in 1987. Excavations each year since then have uncovered more pieces of this urban puzzle and increased the understanding of its history.

The presentation here is not a synthesis of all the information learned from the excavations thus far. The aim is a selection of a few provocative sets of artifacts that will indicate some of the characteristics of this town during the early Islamic period. The artifacts presented here represent the two vague cultural categories of arts and industry.

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These broken bits encompass a world of implications for the development of Islamic culture.

### **Art and Industry**

The archaeologist is confronted with objects, usually broken into pieces, as a prime source for the quality of ancient (or medieval) life. While some of these objects were made in the home, an increasing number were mass produced and purchased in the market. Just as one sees in contemporary life, mass production has led to simpler, less ornate objects. This was balanced, as it is today, by the need to go beyond the strictly functional and to add attractive features; in other words, people value decorations in their daily life and will spend more time making such things and will spend more money in buying such things. These extra touches add to the attractiveness and value of the object; the artistic impulse in their creation adds meaning in association with usage.

Industrial production is also associated with distribution patterns, which is of prime interest to archaeologists since their methodology involves associations in different contexts. An industry necessarily involves buying and selling, that is, trade and commerce. Obviously, a place to look for such activity is in a port, such as the port of Ayla. Thus the occurrence of products manufactured in Ayla, such as amphoras, in other lands and, conversely, objects from abroad which were brought to this port are important aspects of the local economy. It was, after all, in the words of the geographer Yaqubi, a town of "merchants and other people ... ."

### **A History of Aqaba**

Before the foundation of the Islamic city, probably under the caliph 'Uthman ibn 'Affan about 650 A.D., there was an older town of the Roman and Byzantine periods known as Aila or Ailana. It was a Nabataean port, where the Romans began the *via nova* (extending to Bosra; 111-116 A.D.) and stationed the Xth legion Fretensis. The Bishop of the Byzantine town, Yuhanna ibn Ru'ba, made a treaty with the Prophet Muhammad in 630 A.D., securing the safety of his town during the Muslim conquests. When the Muslims decided to settle in the area, they built a new settlement *next to* the older Byzantine town. This new Islamic town, Ayla, is the site of the Oriental Institute excavations. The later castle of Aqaba, where pilgrims to Mecca rested during Mamluk and Ottoman times, was the center of only the most recent settlement. Today the Port of Aqaba is Jordan's southern window to the world and has become a lucrative commercial port and tourist resort.

"The city of Ayla is a great city on the shore of the salt sea and in it gather the pilgrims of Syria, Egypt, and the Maghreb (North Africa).



There are numerous merchants and common people ... ." Thus, Yaqubi described the prosperity of the Abbasid period, the ninth and tenth centuries. Muqaddasi, writing about a century later, called it the "port of Palestine on the China Sea and the storehouse of the Hijaz." The location of Ayla was economically advantageous, especially during the annual pilgrimage to Mecca (the Hajj) because both the North African/Egyptian and the Palestinian/Syrian roads passed through it. Ayla was stocked with supplies for this annual event.

For the end to this prosperity, one may allude to a variety of causal factors. In general, the eleventh century was a difficult period for this port. The Fatimid garrison, stationed there since 961, had to contend with the Banu Jarrah, who finally sacked Ayla in 1024. Earthquakes have been reported for 1068 and 1071, when the town collapsed and sank. The resultant subsidence and faulting of the town into two parts would help to account for the ease with which Baldwin of Jerusalem took the city in 1116. Apparently the ruined town was not reinhabited, but a new settlement grew up around the castle, called Aqabat Ayla (later contracted to Aqaba). Thus the city of Ayla was founded ca. 650 and destroyed and abandoned by 1116, a life of about 450 years.

### **Archaeology of Ayla**

The discovery and delineation of the plan of the early Islamic city of Ayla is the result of excavations from 1986 through 1993. Though nothing was visible on the surface in 1986, these excavations have revealed a walled city with towers and four gates, preserved 4.5 meters

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in height (or, depth below the sands). The best preserved gate was the so-called Egyptian Gate (Bab Misr), flanked by two semi-circular towers; by 1992, all four gates were discovered. The plan of the city ( $170 \times 145$  meters) is marked by axial streets dividing the town into four quadrants. The central crossing originally had a tetrapylon, which later became a wealthy merchant's residence. A beach front suq or marketplace was discovered in 1992 and in 1993 the Congregational Mosque of the city was uncovered.

The detailed stratigraphic information from these excavations is a corpus of intimidating complexity; its acquisition begins with the most recent (on the surface) and uncovers progressively earlier materials. The artifacts and their architectural contexts are here grouped into occupational phases. These phases are the basis for historical reconstruction; the presentation of this history of Ayla begins with the foundation and follows the unfolding of its events over time.

#### Phase A (650–750 A.D. = Rashidun and Umayyad)

This is the period of the foundation and first use of this new city. Unfortunately, the archaeology of this period is covered by the massive overburden from all later periods; most often, exposure of the earliest levels is in small, deep, and rather wet holes. Concentrated efforts on the city walls, city gates, and the Central Pavilion now provide a clear idea of the finely planned and constructed town of the seventh century.



The foundations of these structures are consistently associated with late Byzantine ceramics. This pottery, with its distinctive ware and amphora type, was produced in the kilns discovered in 1993 and suggests the mercantile prosperity of this urban enterprise. These artifacts, like the city plan itself, testify to the gradual transformation from late Byzantine into early Islamic styles in the time of the first caliphs and the Umayyad dynasty. The excavations at Aqaba have made major contributions toward understanding an early Islamic city; Ayla was one of the *amsar*, not a simple garrison but part of a system of settlements created by the early Islamic polity.

#### Phase B (750–850 A.D. = Early Abbasid)

This phase begins with the coincidence of the 748 earthquake and the Abbasid revolution, both having dramatic effects on Ayla. There is clear evidence of the natural catastrophe, but virtually everywhere this was followed by energetic reconstruction into a new, more prosperous town under the Abbasids. The city mosque was enlarged and a new suq constructed outside the sea wall, a sort of mall on the beach.

Artifacts and particularly ceramics illustrate new, international connections, especially with Baghdad and Basra in Iraq. The hallmark of Islamic archaeology, beautiful glazed vessels, begin in this period with imports from Iraq and from Egypt. These luxury goods are mute indications of renewed prosperity and an Islamic cultural identity, which found expression in the scholarly activities in this quiet town by the sea.

#### Phase C (850–950 A.D. = Middle Abbasid)

This phase is our mystery century. Apparently nothing dramatic happened; neither political nor natural events marred its tranquillity. Even more frustrating for the archaeologist, these levels reveal only intermittent depositions of a clean and orderly town. The few ceramics associated with this period are even more sophisticated products in the Samarra style of Iraq.

#### Phase D (950–1050 A.D. = Late Abbasid or Fatimid)

The following century was, by dramatic contrast, a period in which Fatimids warred with Byzantines and Seljuqs. During this turmoil, the town was sacked by the Banu Jarrah, a catastrophe that may explain the abandonment of the two hoards of gold dinars discovered during the excavations. More generally, there was an intensification of housing and narrowing of streets which may also point to a population problem. A generalized increase of trash accumulation may be associated with more generalized social problems and disruption in occupation patterns which seem to have characterized this century.

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The artifacts become (gratifyingly) more numerous and interesting. Virtually all Chinese sherds, as well as superb pieces of Fatimid luster ware from Egypt, have been found in this phase. By sharp contrast, there is a dramatic increase of handmade pottery, called Tupper ware by the archaeologists. The artifacts may indicate a growing difference in access to luxuries; the rich getting richer and the poor, poorer.

**Phase E (1050–1116 A.D. = Fatimid)**

The archaeological problems of this period, the proximity to the present ground surface, are the opposite of Phase A. Exposure of stone walls



has resulted in removal and decomposition (even of salt-saturated granite); even so, cobble wall repairs and an increase of mudbrick walls suggest a decline in the quality of late construction. The layers show debris of wall collapse and extensive accumulations of ash and refuse, all of which may be evidence of the 1068 earthquake and the subsequent efforts at reconstruction and rehabilitation. This earthquake, which had its epicenter nearby, may have literally

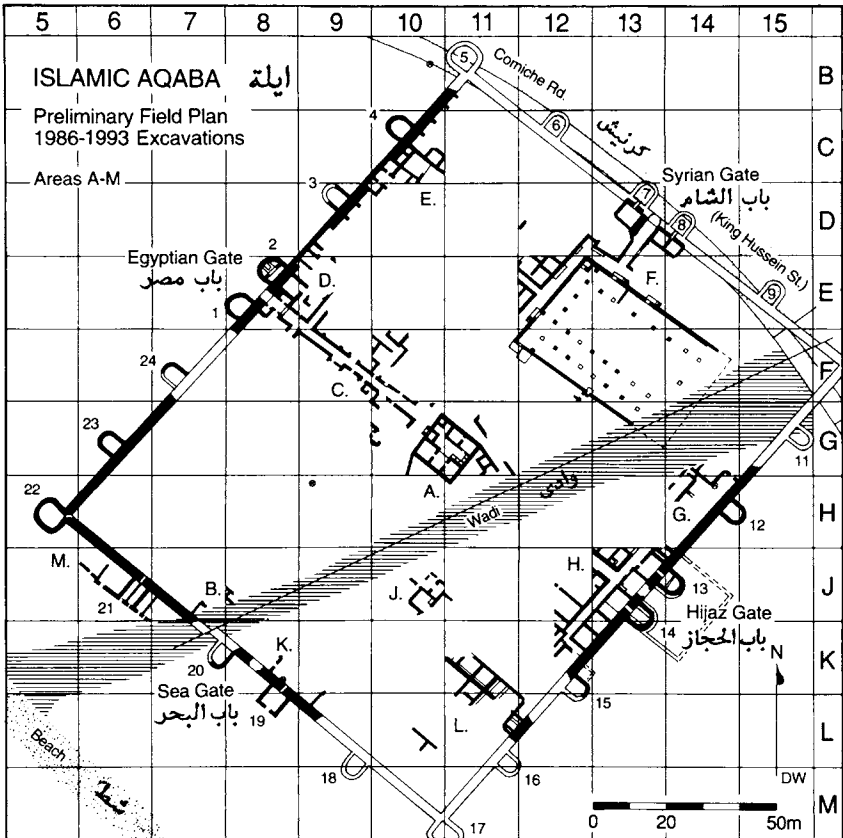
split the city in two, the wadi being evidence of a fault line. After this, the arrival of Baldwin and a small band of Crusaders broke the resolve of the inhabitants. They abandoned Ayla and went on to settle elsewhere.

The archaeological evidence has been assembled into segments reflecting the life of this town. The life history of Ayla began with its foundation during Phase A, periods of growth and prosperous maturity occurred in Phases B and C, disruptions and decline mark Phase D, and the city experienced its final traumas in Phase E. This picture is an abstraction of a city, drawn on one set of interpretations and ignoring its interaction with other cities, states, and regions. Political and social history of this portion of the Middle East might provide a very different picture of Ayla, one that has yet to be drawn.

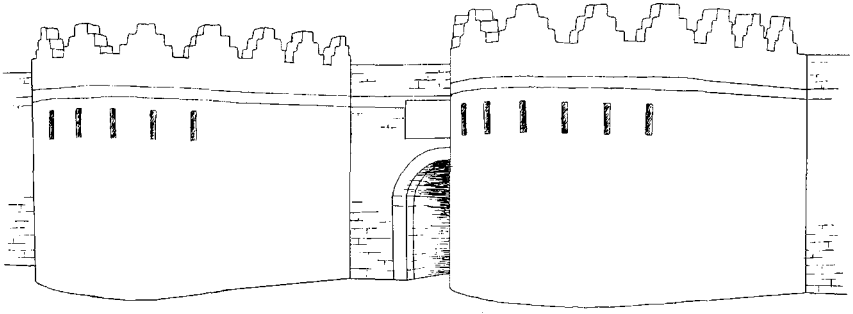
**The City Plan of Ayla**

Nothing of the plan illustrated here was visible when excavations began at Aqaba in 1986. The plan is the result of the slow process of recovery, study, and interpretation; while a great deal of information has been revealed, many aspects of the city await discovery. The city is a rectangle measuring about 145 × 170 meters, enclosed by a stone wall (2.6 meters thick). The walls had a series of U-shaped towers and corner towers;

two towers flanked each of the four gates. The gates have been named according to the traditional system for Islamic cities: the Egyptian Gate on the northwest, the Syrian Gate on the northeast, the Hijaz Gate on the southeast, and the Sea Gate on the southwest. Behind each gate was a major street, crossing in the center of the city; this point was originally marked by a Central Pavilion, like the classical tetrapylon.



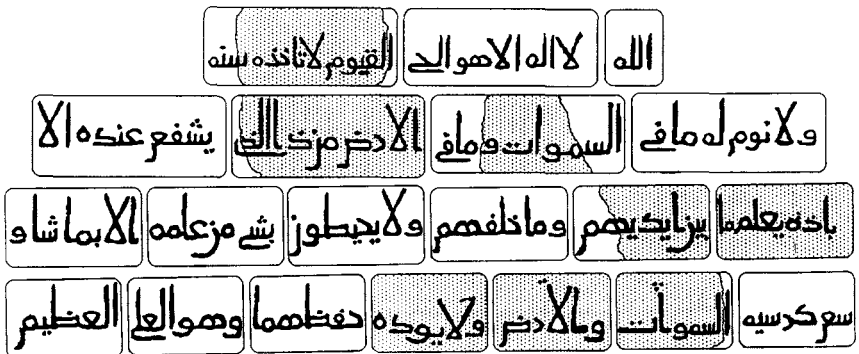
The rectangular plan, towers, and other details strongly recall the typical legionary fort of the late Roman period. Indeed, such a legionary fort was constructed at Aila, the classical town located to the west of the Islamic city. This and other forts probably served as a model for the foundation of Ayla, an interpretation supported by attention to structural and stratigraphic details in the excavations. Ayla was one of the *amsar*, the series of cities founded directly after the Muslim conquest. As such, the city plan of Ayla provides a rare example of an early Islamic city.



### Ayat al-Kursi Inscription

By the 1992 season, the four gates of Ayla had been uncovered. The most important and best preserved was the Egyptian Gate, that is, the northwestern gate. Two strong towers flanked the original gateway, which was 3.0 meters wide, defined by a handsome round arch. A number of limestone blocks with carved inscription were found in the collapsed rubble in front of the Egyptian Gate. The style of writing indicates that the inscription was placed over the arched gate in the eighth century. Stylistic changes suggest some recarving and replacement at a later period.

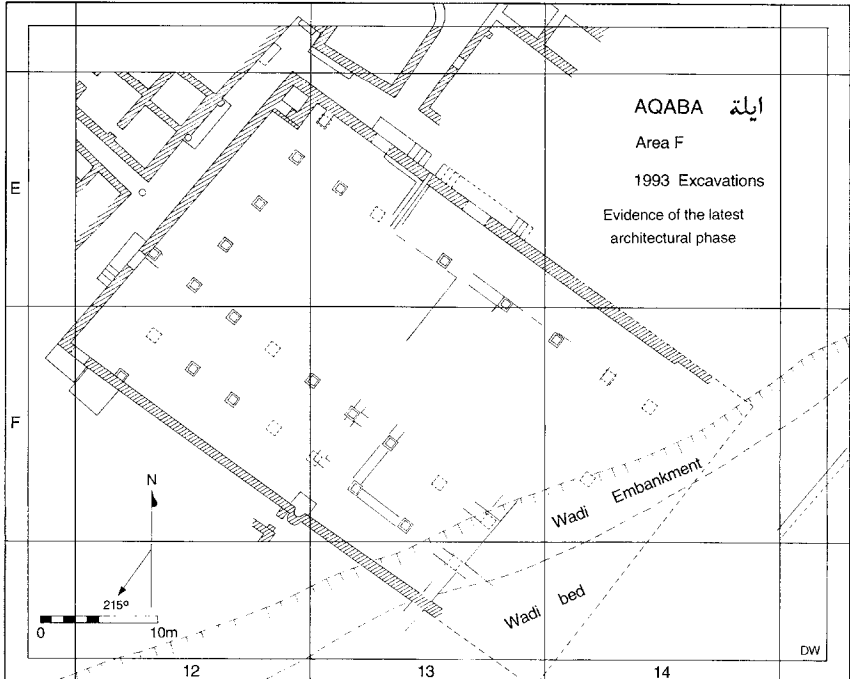
This inscription is the verse from the Qu'ran called the Ayat al-Kursi (The Throne Verse). The drawing shows the blocks discovered with Kufic lettering; the missing portions of the verse have been added. The Ayat al-Kursi is often quoted and placed in homes today. Displayed above the city gate, it was no doubt felt an especially appropriate verse for protection of the city.



## The Mosque

The Congregational Mosque (*masjid jam'ī*) of Ayla was excavated in 1993. The clean gravel floors were just below the present ground surface and the plan of the walls and columns was determined only from their foundations. The plan shows a broad courtyard with a peristyle colonnade around three sides (the eastern side must be imagined). The southwestern side has a second row of columns marking this as the covered part of the mosque. In the center of this southwestern wall was a deep niche, the *mihrab*, which indicates the *qibla* or direction of prayer. This direction should be toward Mecca, but the orientation at Ayla, like many early mosques, is incorrect.

The mosque in early Islamic times was more than a place for religious services. The mosque was the scene of public meetings and political ceremonies, it was the place where the Muslim judge (*qadī*) held court, and it was the center of education in the religious and legal sciences. This last aspect was particularly important in Ayla. From the eighth through the ninth centuries, Ayla was a major center for *hadith* studies (traditions of the Prophet). A local Ayli school developed around al-Zuhri, particularly his students 'Uqayl ibn Khalid and Yunis ibn Yazid, the heads of two prominent scholarly families. Interestingly, these scholars also did periodic duty as police (or city-guards) in the holy

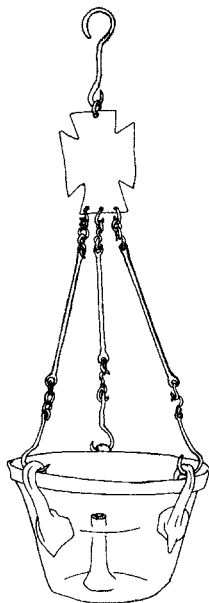
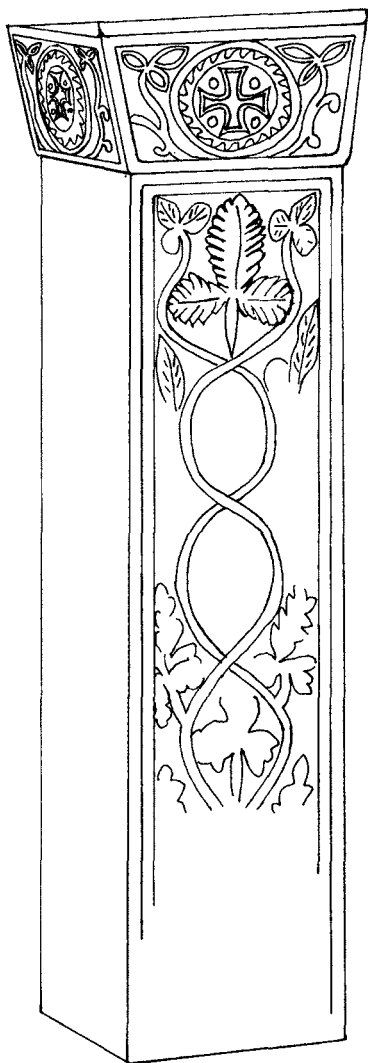


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city of Medina. Needless to say, these men also emigrated to the great cities of Jerusalem, Damascus, Fustat (Cairo), and the port of Alexandria. The mosque of Ayla was rather like the Stoa of Athens, a place of study and discussion among the columns.

### **Capital and Crosses**

Numerous Byzantine artifacts were found in the excavations. Architectural fragments from churches also appear in the excavations; stratigraphically, these objects usually do not occur before the ninth or tenth century, which suggests that churches in Aila continued to be used, or at least were left undisturbed, for two or three centuries. Probably, these building materials were slowly taken from abandoned buildings in the old town.



The capital illustrated here belongs to a type found in late Byzantine churches, such as those on Mt. Nebo in Jordan. A nearer comparison would be the churches in late Byzantine towns in the Negev Desert or on Mount Sinai.

The architect of the church of St. Catherine on Mt. Sinai was Deacon Stephanos, who came from Aila. The capital



was placed at the top of a jamb of a doorway. The remainder of the jamb might have been decorated with a vine motif, as represented by blocks found elsewhere on the site.

Several crosses made out of bronze have been found in the excavations. One cross had attached chains, one above and three below, each with a hook. Such chains were used to hang bronze or glass lamps and are very common on Byzantine sites in Palestine from the sixth through eighth centuries. Similar cross and chains were found at Nessana in the northern Sinai. The archaeological context of the bronze cross found at Aqaba, like the capital, is below the foundation of the mosque. How they found their way into the early levels of the Islamic town is a matter of speculation.

### Coins

A gold *solidus* (a) of the Byzantine emperor Heraclius, who ruled from 610–641 A.D., was discovered on the eastern part of the site. The reverse of this coin depicts his associate Heraclonas crowned, narrowing the date of this issue to 638–640 A.D. Aila had become part of the Muslim sphere of influence in 630 by treaty and had been visited by the caliph 'Umar in 638. In that same year Heraclius' army was decisively defeated at the Battle of Yarmouk.



a

This coin was one of the plentiful examples of the Byzantine *solidus* brought into the Muslim territories as booty or tribute. Indeed, the early Arabs probably had no official coinage and imported coins were apparently the only coins used for some fifty years, until the monetary reforms of the Umayyad caliph Abu al-Malik in 692. This coin of Heraclius illustrates the slow adaptation of Islamic culture to political authority following the sudden collapse of the Byzantine and Sasanian empires.

Two Islamic coins illustrate the range of early Islamic coinage. The first is an issue of al-Ramla, a bronze *fals* (b) identifiable only from its

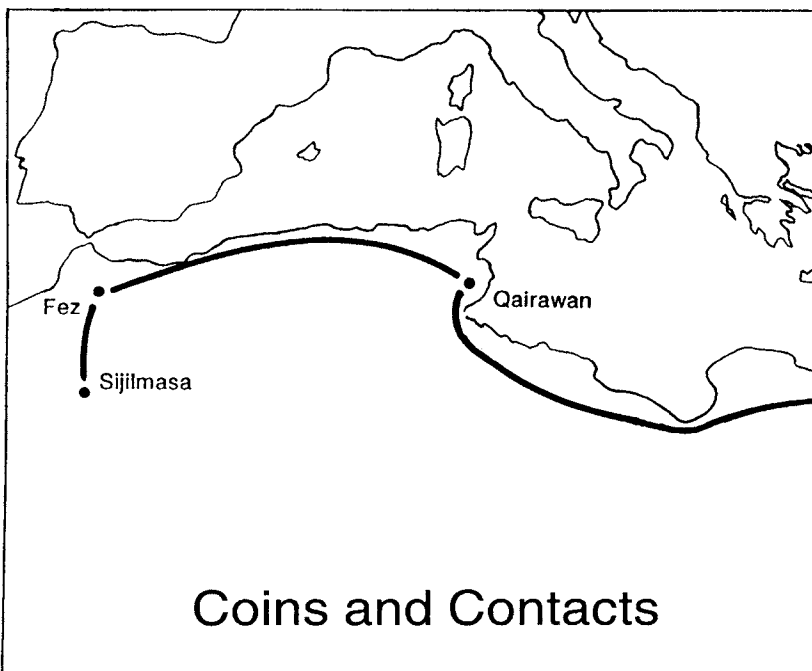


b



c





## Coins and Contacts

palm branch, usually taken to be the symbol of that city. The city of al-Ramla was a new urban foundation, rather like Ayla; it was founded by the caliph Suleiman about 714 near the older city of Ludd (Lod), not far from Jerusalem. Al-Ramla became the capital of the province of Filistin and one of the main mints under the Umayyads; it is hardly surprising to see examples of such small change introduced into the local economy of Ayla.

The second coin is very different, a silver *dirham* (c) probably minted in Cairo (al-Qahira). This coin is an issue of the Fatimid caliph al-Hakim, who ruled from 996–1010 A.D., and represents the dominance of Egypt over Ayla. Indeed the medieval geographers often placed Ayla on the border of Egypt. The coin would probably have been the most common currency seen in Ayla during the later early Islamic period.

The two Axumite coins discovered at Aqaba illustrate different aspects of the Christian coinage of Ethiopia. The first (d) is an anonymous issue of the early Christian period, based on similarities to

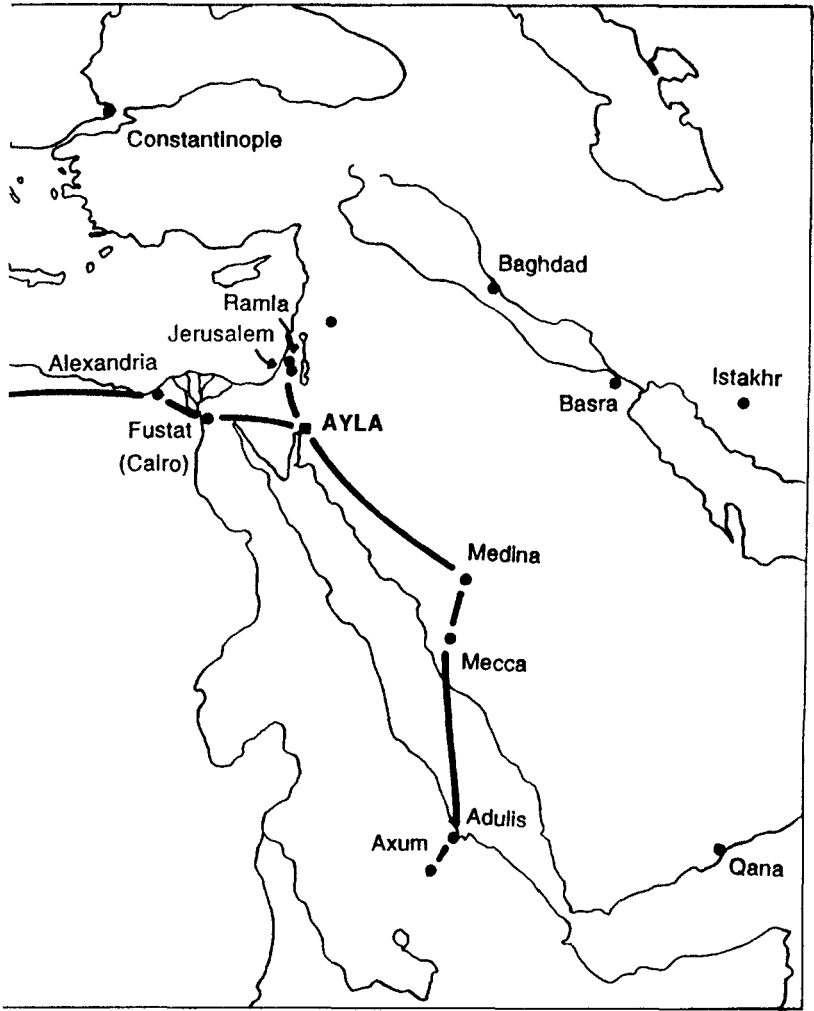


d



e





known kings of the late fourth and early fifth centuries. The one side has a profile bust of the king with *basileus* (king) written in Greek. The reverse has a central cross surrounded by the motto, “may this please his people,” also in Greek. Such coins are very common, often making half of Axumite collections, and have been found in Palestine, illustrating the trading connections between these Christian regions.

The second Axumite coin (e) is an issue of Gersem, a king known only from his coins; he is usually considered one of the last kings of Axum to have issued coins. His reign is generally dated to the seventh or early eighth century (one scholar, Kobishchanov, suggests there were two monarchs, Gersem I in late sixth-early seventh century and Gersem II in the eighth century). This coin was found in the tower flanking the

Sea Gate, when it had been reconstructed as part of the seafront market. The deposition of the coin occurred soon after the 748 earthquake. This coin has a special importance when considered with the occurrence of Aqaba amphoras in Axum; it suggests a continuing alliance between the Axumite kingdom and the Muslim state and shared participation in the new prosperity of the Red Sea region during the first Islamic centuries.

A hoard of thirty-two gold *dinars* (f), popularly known as the Ayla Hoard, was found buried in the main street just inside the Syrian Gate. Three coins are standard Fatimid issues, all minted in North Africa under the caliph al-Hakim. The remainder of the hoard is a homogeneous group of gold coins (over half these coins were minted from only two sets of dies). These dinars were probably minted in Sijilmasa, a southern Moroccan town on the edge of the Sahara and the first city with a mint on the caravan route that brought West African gold to the Islamic world. Virtually all the dinars bear the name of Hisham II, who ruled in Spain from 976 to 1013 and was apparently recognized in

Sijilmasa. These coins are extremely rare, even in Morocco, and this is the first discovery outside that region.

This hoard was probably a merchant's or traveler's "purse," possibly belonging to a Moroccan pilgrim on his way to Mecca. The North African pilgrimage caravan of 1024 was attacked at Ayla by local bedouin, the people sold into slavery and over three thousand dinars taken. Whether the Ayla hoard is mute witness to this catastrophe or the misfortune of an individual traveler, these coins serve as eloquent testimony to the vast economic relationship connecting the entire medieval world, involving the Mediterranean, African, and Asian regions.



f

### **Glass and Bronze Weights**

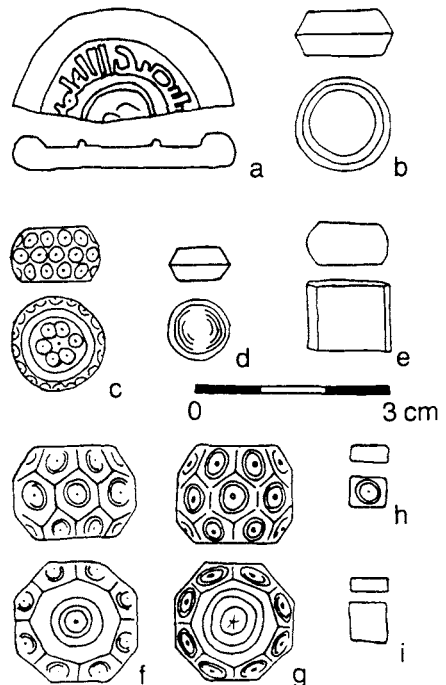
Small glass weights are common in museums and private collections but rarely come from archaeological contexts. They are small disks of glass with an impressed inscription on one side; they are usually as-

sumed to have been balance weights, probably for weighing coinage (coins had a very wide range of actual weight and metal). Most of the glass weights from Aqaba were Fatimid, principally from the reigns of al-Hakim and al-Mustansir (comprising most of the eleventh century). The majority of glass weights were found near the city gates, suggesting weighing and measuring, in short trading, within these areas. The glass weight shown here (a) was found near the Sea Gate; though a surface find, its deposition was probably associated with destruction from the 1068 earthquake.

Bronze weights are not usually inscribed but have a wide range of shapes and decoration; the typology includes the *barrel* form,

a truncated biconical shape (b, c, d), the *polyhedral* type with sides cut into polygonal facets (f, g), the very common *brick* shape (e, h), and the *square* shape (i). These bronze weights relate to two systems, the values for the *dirham* (silver) and *dinar* (gold) coins. Analysis is very complicated, perhaps due to corrosion and wear; the very large corpus of weights found at Caesarea in Palestine suggests standard weights of 4.19 grams for the *dinar* and 2.90 grams for the *dirham*. The commonly accepted value for the *dinar* is 4.25 grams and, for the *dirham*, 2.97 grams. The stratigraphic contexts of Aqaba weights gives some idea of the changing nature of these weights; heavier weights became more elaborate, lighter weights simpler.

The glass and bronze weights are evidence of the quickening of the Indian Ocean and Far Eastern trade in the Fatimid period, as witnessed by the appearance of Chinese and Fatimid luxury ceramics. Increasing trade is in sharp contrast to a declining quality of life, suggested by rapid accumulations of trash within residential areas. Both documentary and archaeological evidence agree to the anomaly of commercial expansion and social collapse during this period. The elaborate system of weights leads to speculations on the nature of the Fatimid economy. While the weights do not necessarily imply fiscal control by the government, they were a convenience for merchants and



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may have been required by the market official (*mu'tasib*) of Ayla. This was a time when all money had to be weighed and coins moved over vast and varied realms, as illustrated by the coins recovered during the excavations.



### Two Medallions

The Horse Medallion is a molded disk of glass that has a horse in high relief with an Arabic inscription over its back, reading *b'ismillah*, "in the name of God." The disk was attached to a glass vessel, rather like the famous Pegasus Bowl in the Berlin Museum (also with Arabic inscriptions). Vessels with decorative disks are common in Sasanian glassware from the sixth century onward. Likewise, such horses, usually winged, are common in the Sasanian world. Very close parallels occur in seal impressions, with the owner's name and title in Pahlavi behind the animal (a). The Horse Medallion is a reinterpretation in glass of an image taken from a Sasanian seal.

The Head Medallion, also of glass, has in relief a frontal head with a high mass of parted hair. While such heads (or masks) have been added to glass vessels since the Roman period, the style of this head is very close to one in the Cairo Museum (b; also with an Arabic inscription, *b'ismillah*). A large number of







a



b

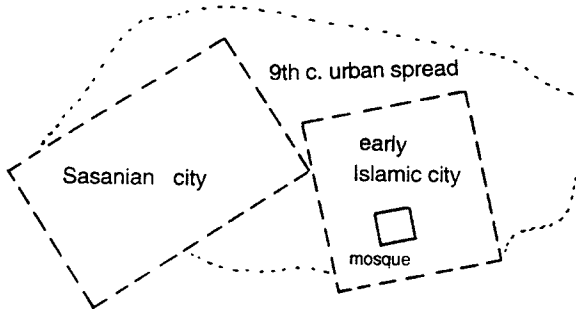
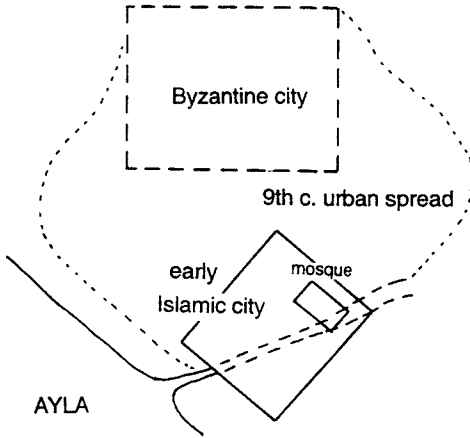
glass heads have been found on Sasanian sites, especially the city of Istakhr, excavated by the Oriental Institute. The context of these parallels is dated to late Sasanian or early Islamic times. The style of the heads is similar to the Aqaba head, except for prominent beards.

### **Sasanian (Persian) Influence in Art and Urbanization**

The first question that might be posed for these two medallions is a question of iconography. Both the horse and the head are related to Arabic inscriptions, directly with the Kufic *b'ismillah* above the back of the horse and indirectly with Kufic embellishments for the bust type of head medallion. This inscription over the horse seems directly derived from the position of Pahlavi inscriptions on Sasanian seals. The replacement of Pahlavi with Arabic while retaining imagery is reminiscent of the transformations on both Byzantine and Sasanian coin types in the early Islamic period. The imagery, far from being offensive, was apparently valued and utilized with minor modifications.

One might remember that Sasanians controlled Yemen from 570 A.D. and, more importantly, Sasanians occupied Palestine and Egypt from 618 to 629 A.D. Only five years separated the Sasanian from Muslim rule over Palestine (and of course Ayla). This Sasanian presence would have affected the commerce of the Red Sea, and imagery of authority, especially sealings and coinage, would have been current. Sasanian culture in Palestine, immediately before the Muslim conquest, may have formed a much stronger component in the development of early Islamic culture than is generally assumed.

These images suggest a process of experimentation and adaptation of older cultural forms just as has been noted in the first Islamic coinage. The utilization of the horse and perhaps the head mask may possibly be analogous to the standing caliph phase of coinage or, by extension, to the figural embellishments of the desert castles and eventually Samarra. A clear example may be seen at Khirbat al-Mafjar where one is faced with the extensive and explicit utilization of Sasanian im-



ISTAKHR (1/2 scale)

of Aila, a pattern similar to the development of early Islamic Istakhr in Iran. In the case of Istakhr, the older Sasanian city was amalgamated into the Islamic city seen in the plans. The plan of Ayla was an adaptation of the older Roman legionary camp, while Istakhr seems to have taken the Sasanian city as its model. In either case, the pattern of urban settlement is one of adoption of older forms in a new locational context.

Whether the subject is small medallions of glass, embellishments on the desert castles, or plans for urban foundations, these physical manifestations are articulations of early Islamic culture. The pervasive interest in the continuance of classical forms has tended to obscure the contribution of the less thoroughly studied Eastern forms, here the achievements of the Sasanian empire. The study of the *misr* as the setting for the social changes crucial for the development of early Islam has tended to neglect the possible influence of Sasanian cities. Perhaps this example of figural art may remind us of this component in the history of the early Islamic period.

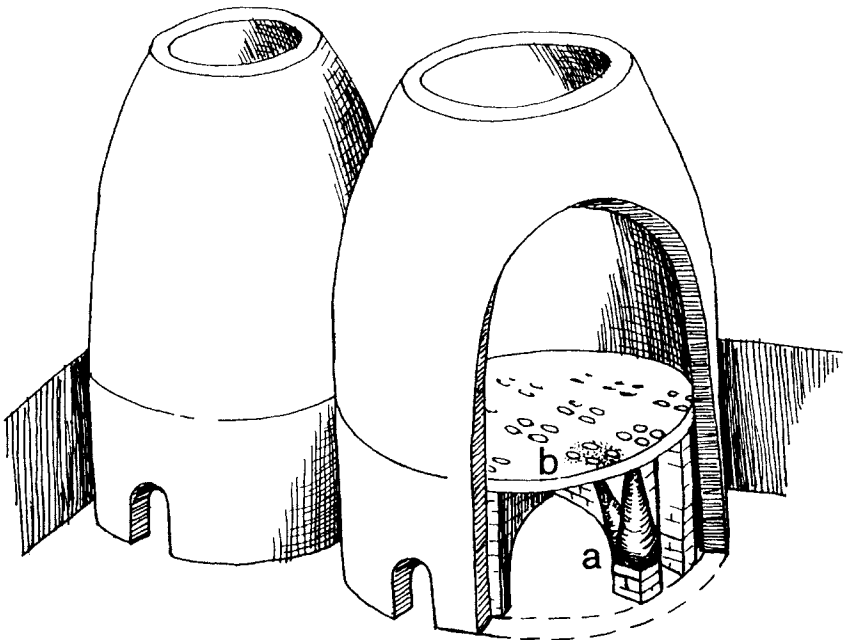
agery, to the extent that many commentators as well as the excavators have suggested the presence of Persian craftsmen. A similar process of experimentation and adaptation of familiar and symbolic forms has been suggested for the urban plan of Ayla. Ayla was a *misr*, an experiment in early Islamic urbanization. In the case of Ayla, the form adopted (or image portrayed) was that of the legionary camp. This new town was placed next to the older Roman-Byzantine city

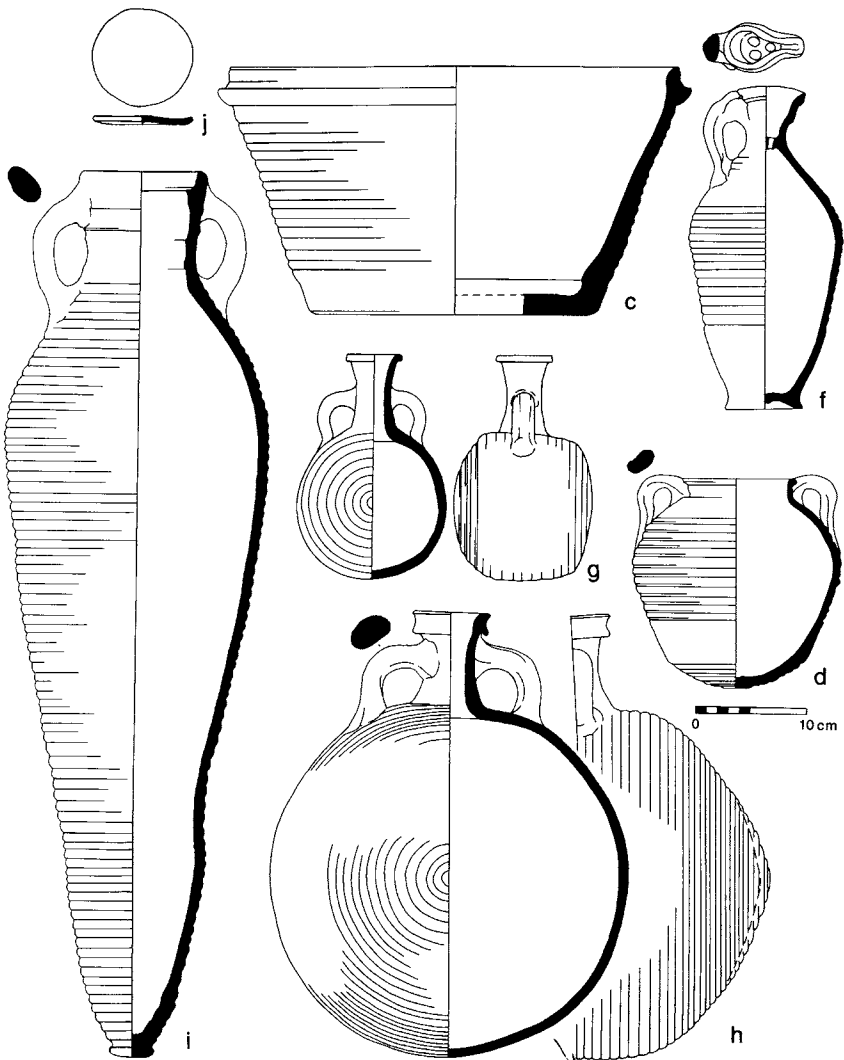
## Kilns and Pottery Production

Two kilns were excavated in Aqaba in the 1993 season and, although only partially uncovered, their preservation and artifacts have provided a wealth of information on pottery production in the early Islamic city. The kilns are a simple updraft type. A lower firing-chamber was probably subterranean and filled with fuel via a doorway. The floor of the oven was supported on arches—one arch was constructed of damaged amphoras (a). The oven floor (b) had numerous holes to allow the heat to reach the stacked pottery being fired. The oven walls formed a cone, possibly domed, over the pottery. The Aqaba kilns were over 3.0 meters in diameter; this size and reports of other kilns in the vicinity suggest a large scale industrial operation.

Although both kilns were found empty, wasters of several ceramic types, especially amphoras used as floor supports, were in the debris. Among the distinctive products of Ayla were a type of heavy basin (c), a globular cooking pot with two strap handles (d), a graceful juglet (f), and pilgrim flasks of both normal (g) and giant sizes (h). The most important product was the Aqaba amphora (i); its characteristic feature is the internal ledge below the rim for receiving the lid (j); a great many were found in the excavations. Similar amphoras were common in the eastern Mediterranean in the sixth and seventh centuries.

The Aqaba kiln complex met more than the demands of local consumption. Amphoras are a very unusual industrial product, a type





of specialized container designed for ship holds. Large numbers of amphoras were necessary at Aqaba to repack goods for maritime transport. The goods were grains, oils, and luxury goods (fruits, nuts, etc.) from the Syrian and Mediterranean region destined for Arabian cities. This commerce spread throughout the entire Red Sea region, at least as far as Aden and Ethiopia. Aqaba amphoras have been found in South Arabia (at Qana near Aden) and at the port of Adulis and Axum, the capital of medieval Ethiopia. (Note the two late Axumite coins found in the Aqaba excavations.)

These kilns represent a new industry well suited to the economic enterprise of the early Islamic period. During the first decades after the Muslim conquest, this region experienced a period of commercial growth spurred by unification, new prominence of the Hijaz, and availability of entrepreneurial capital. One of the results was the foundation of the new port of Ayla, probably under 'Uthman ibn 'Affan ca. 650. The pottery itself reflects this new spirit. While there remain strong affinities with late Byzantine Palestine and with Coptic Egypt, this ceramic bears the characteristics of a strong new tradition. The expansion of Islam, as evidenced in material culture, initiated a dramatic period of experimentation when one might expect to find new city plans or ceramic types. In a sense, the discoveries at Aqaba are not only a key to the unfolding of Islamic culture but also provide a glimpse at the mechanisms of historical change for any period or place.

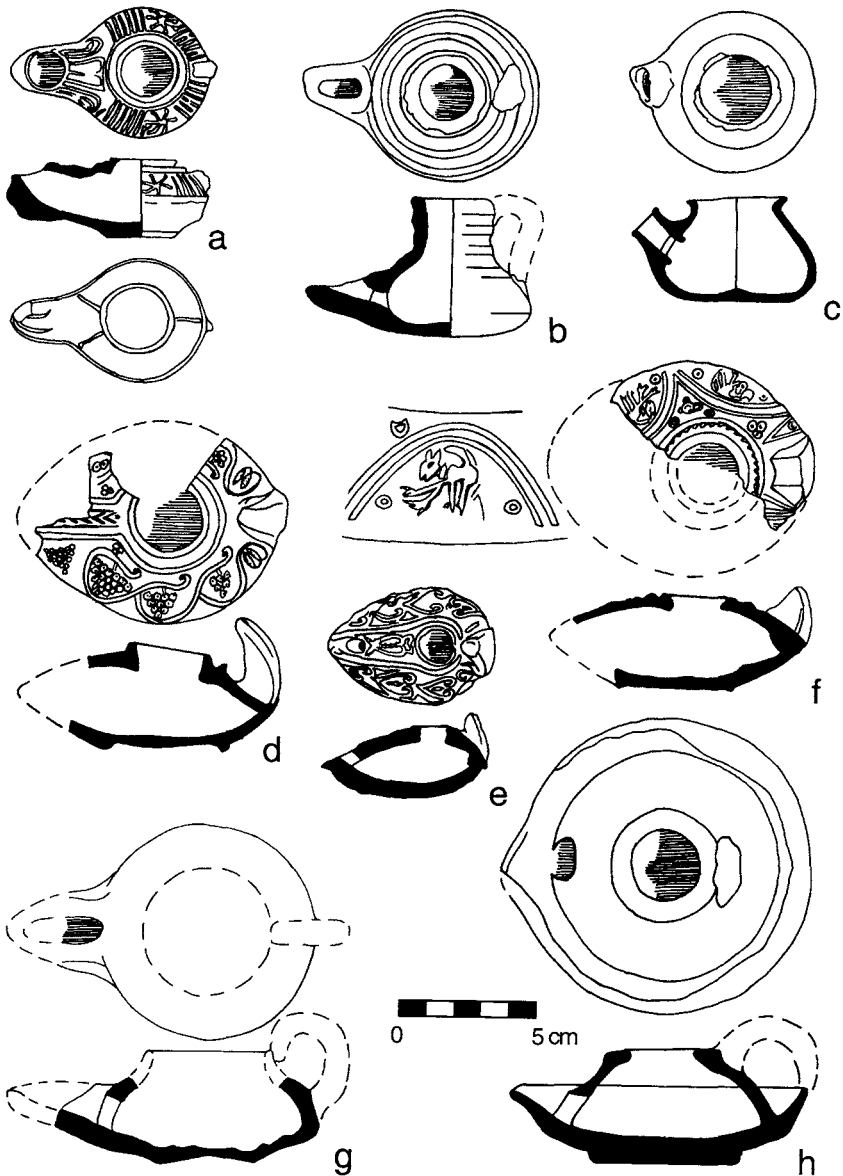
### **Lamps**

In this age of electricity it is difficult to remember that, for most of history, one lit a small oil lamp to see anything after dark. Oil lamps need not be fancy, a simple wick on the edge of a small bowl will suffice. Yet lamps have alternated between simple utilitarian vessels and highly ornate works of art. From the classical period on, clay was pressed into molds to make very inexpensive decorative lamps. The lamps at Aqaba have great variety and each season brings new types to light. At the same time, stylistic patterns are now clear, defining the changes in taste from the seventh through the twelfth century.

The first lamp (a) is a small variant of the Byzantine slipper lamp (also known as the candlestick lamp). The sides have radiating lines except for the Chi-Rho, suggesting a Christian maker of the lamp. This lamp may be seen as the end of a long line of classical lamp styles. Such lamps and their predecessors are common at Petra, one hundred kilometers to the north of Aqaba.

Wheel-made lamps became popular in the late Byzantine period. At Aqaba two styles are found. One is a small red ribbed jar with a low spout (b). Its inspiration in ware and form comes from Egypt; nevertheless, these lamps are common only in Palestine and the Negev at late Byzantine and early Islamic sites. A second type of wheel-made lamp is similar, a cream ware jar with a stubby conical spout (c). While there are small Coptic lamps (rather like ink pots) in the Nile Valley, these lamps have not been found elsewhere and are now called "Aqaba Lamps."

Islamic molded lamps constitute the largest and most varied type found at Ayla, as indeed they are in Palestine in general. The form is amygdaloid (almond or tear shaped) with either a conical or tongue handle. There is a channel to the wick hole of the spout. The decoration

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is a molded pattern on the top, with great variation. The most common have meandering vegetal decoration (usually grape vines, d); less common are stylized palmette leaves (e) and arcades with animals (f). Examples have been found with glazed coloring. There has been no reliable chronological study of these common lamps; they seem to occur from the eighth through the tenth centuries in Palestine and Egypt.



Islamic glazed lamps change dramatically in the eleventh century, when they return to small jars with spouts (g). The looped handle makes the forms reminiscent of recent candlesticks, except for the spout. Both the interior and exterior were brightly glazed, often in simple green or yellow. The type is most readily paralleled at Fustat (old Cairo), suggesting a probable Egyptian production. Islamic saucer lamps are usually unglazed (h). One variety is the lidded saucer, in which a jar rim is fitted onto a saucer (the lid becomes smaller over time). Only a few of the lidded type are present at Aqaba, suggesting that these changes began in the eleventh century and continued after the site was abandoned.

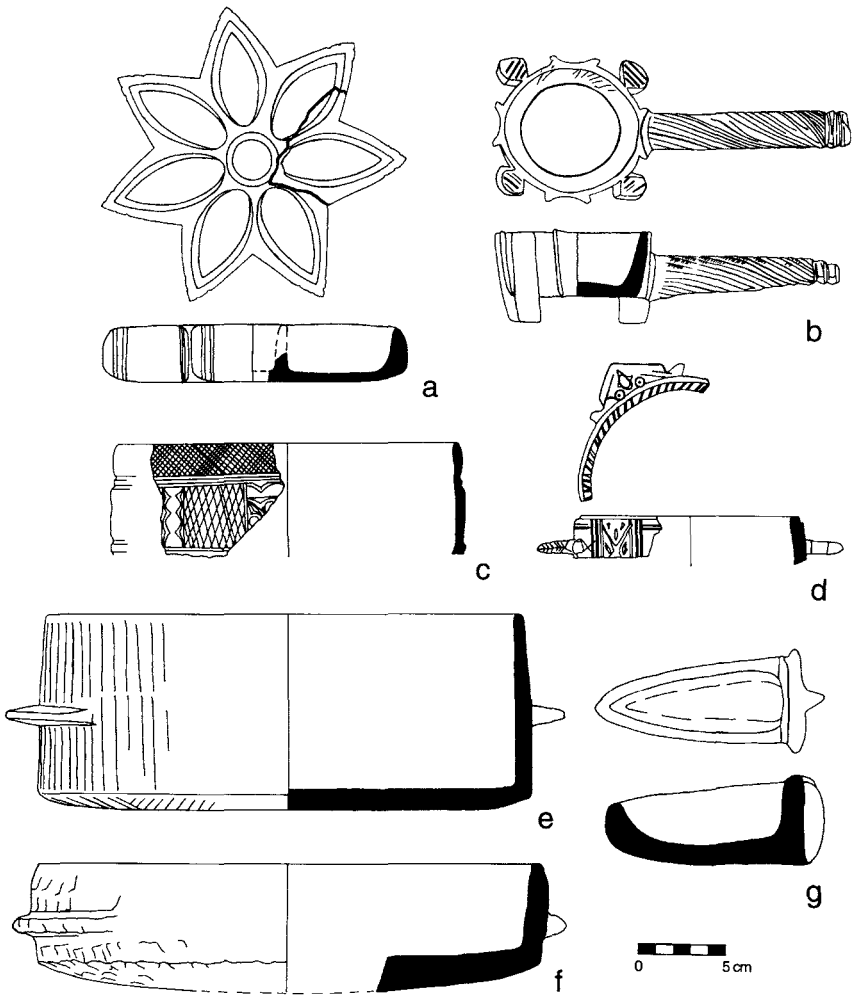
### **Steatite Vessels**

The artifacts made from steatite, more commonly known as soapstone, reflect the unique properties of this stone. Steatite is easily carved and undamaged by fire; in fact, the stone retains heat, making it an excellent material for cooking pots. Steatite artifacts are thus good examples of utilitarian objects combined with decorative embellishments.

Steatite lamps range from a simple boat-shape (g) to a multiple spouted "chandelier" in the shape of a rosette (a). The small brazier (b) is an intricate piece of carving; its form is probably related to metal braziers of the same time. The size and shape also relate this vessel to a long tradition of incense burners (usually without handles), found throughout the ancient Near East. The most elaborate carved decoration is usually found on the pyxis or box (c, d). These little containers may have been fancy serving dishes, particularly for foods meant to be kept warm. The designs are geometric and floral and were imitated in contemporary ceramic vessels.

By far, the most common use of steatite was for cooking pots (e, f); broken sherds of such pots are frequently found in the later levels of the excavations. The form has a slightly curved bottom making a sharp angle with nearly vertical sides; the two ledge handles are sometimes connected with a decorative band. Such large pots are obviously imitations of bronze caldrons. The exterior surface of the latest pots (e) has vertical fluting, a decorative device possibly imitating metal pots. Earlier cooking pots have smooth sides and the earliest, possibly Umayyad, has a honeycomb surface treatment (f).

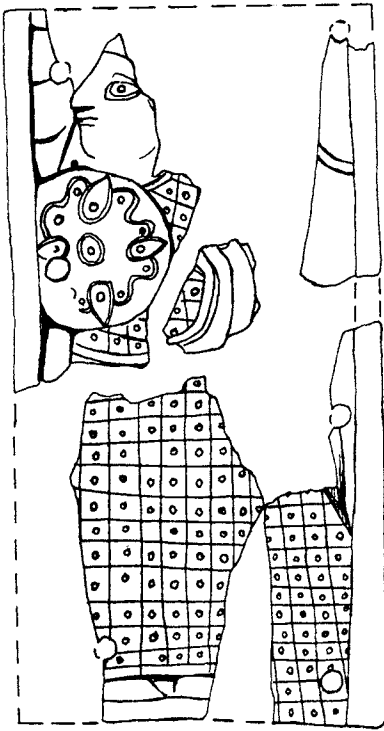
Steatite is found in only a few parts of the world. The source of the stone found at Aqaba is Yemen or western Arabia (the Hijaz). Steatite production in Yemen has been studied from the mining through the finished product. Earlier mines were active in the Hijaz during the eighth and ninth centuries, a by-product of expanding settlement and enterprise (including gold mining) in the early centuries of Islam. Archaeological evidence of mines and trade through Arabian ports is



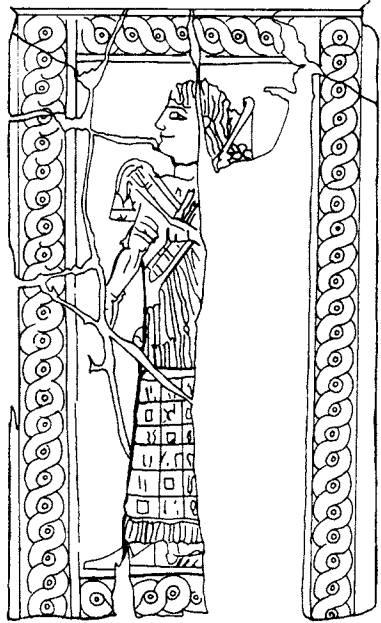
now available; while steatite vessels are hardly luxury goods, these utilitarian goods were widely traded and very similar to vessels found at excavations in Egypt, Iraq, and Iran, the principal regions of the Abbasid empire.

### **Ivory Plaques**

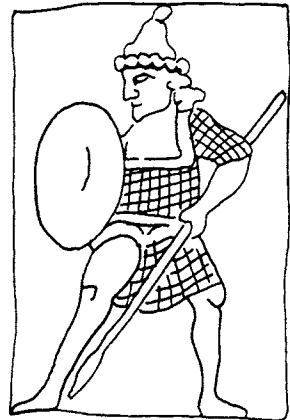
A large number of small fragments of ivory or bone were found in a room, apparently inlay pieces for a box or furniture. The context suggests a tenth or early eleventh century date. The elements of composition repeat, suggesting multiple copies of each design. All pieces have nail holes for attachment.

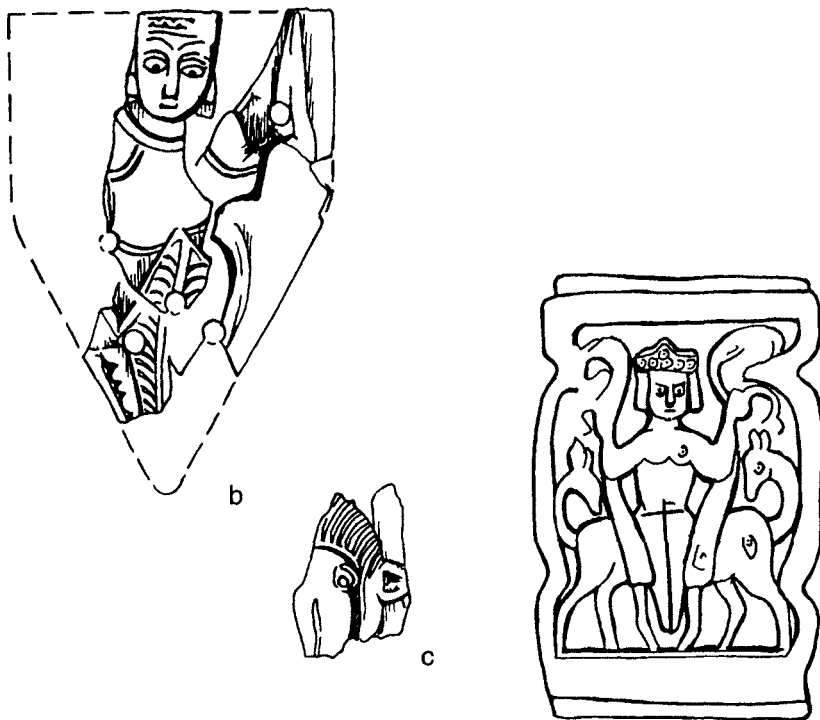


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A flat plaque (a) depicts a standing man, his face in profile, carrying a decorated shield. His body is apparently covered with patterned cloth or, more likely, mail armor extending down to the ankles. A second composition (b) is carved in higher relief on a rounded bone; the form is a pentagonal shape. A frontal bust of a person wearing draped clothing and possibly a diadem on the head. A large leaf is in front and apparently continues on either side. [Note that the two parts of this composition come from two panels which differed slightly in size.] Other elements of different scenes (or possibly appliques to these two panels), include a horse head (c), drapery, and floral elements. The presence of other panels is confirmed with two types of borders, beaded or floral decorations (d, e).



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These panels present an archaeological problem, rather different from the other artifacts discussed. The panels are distinctive works of art without clear date or source and, indeed, without immediate parallels to explain the subject matter. When confronted with objects of unknown date, place, or identity, archaeology works by comparisons.

The man with a shield is a composition strikingly similar to figures on ivory panels from Nimrud. The Assyrian work, almost two millennia earlier, is very different in style, though one may wonder if their works might have been found and copied. A more direct comparison is with ivory panels attached to Byzantine boxes; a great number of such boxes are known with a variety of subjects. One series of boxes features soldiers in various heroic poses, including holding a shield. These date from the tenth or eleventh centuries.

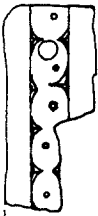
The frontal figure is far more difficult, mainly due to its enigmatic identity. Is the figure a man or woman? What were its surroundings? How was this unusual shape used? Bone panels in both rectangles and pentagonals were found at Fustat (old Cairo), though the carving style is somewhat different. An Egyptian source is tempting, given the strong bone carving tradition of Alexandria from the classical through Coptic periods. One carved piece of wood inlay from Fustat shows a similar

enigmatic figure holding two animals, suggesting the vastly older "Mistress of the Animals."

What is the meaning and importance of these carved fragments? Did a person in Ayla purchase and enjoy something totally unique or might these be fragments of far-reaching areas of decoration and industry not yet studied? If depictions, admittedly fragmentary, can be almost totally unidentifiable, what meaning may they hold for Aqaba? It is appropriate to end a positive exposition of these excavations with questions. After several years of digging, an official commented that each season brought a new plan of the city. The reply was that each season produced a *better* plan. Likewise, the research of each year in Aqaba produces not more answers but better questions.

### Credits

The archaeological research on the early Islamic city of Ayla has been an extremely complex enterprise, one benefiting from many institutions and individuals in the United States and the Kingdom of Jordan. The sponsor of the project in the United States has been the Oriental



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Institute of the University of Chicago and its directors, Professors Janet Johnson and William Sumner. The sponsor in Jordan has been the American Center of Oriental Research and its directors, without whom the project would not have been possible, Dr. David McCreery and Drs. Pierre and Patricia Bikai, who facilitated the support by grants from the United States Agency for International Development. Further support has been granted from the National Geographic Society and, most recently, by the Van Berchem Foundation (Geneva). Numerous private contributors, mainly members of the Oriental Institute, have also provided generous support.

The most important element in the success of this project has been the involvement of Jordanian scholars and individuals. The Department of Antiquities has enthusiastically embraced this research, particularly its directors, Dr. Adnan Hadidi, Dr. Ghazi Bisheh, and Dr. Safwan Tell. Crucial beginning support was provided by Mr. Nasri Attala of the Department of Tourism and



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Dr. Dureid Mahasneh of the Aqaba Region Authority. More recently, Ms. Sausan Fakhery, Mr. Mohammad Frehat, and Mr. Mahmud Hellalat, responsible for Antiquities and Tourism in Aqaba, have become active participants in this project. This list could really expand indefinitely; two groups must be mentioned: the first is the increasing number of Jordanian students who have worked and researched at Ayla with consistent quality and enthusiasm, and finally the people of Aqaba, who have responded to the site and museum as aspects of their history.

