

AQABA

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The excavations at Aqaba attempted a different approach during the year 1992; rather than one long season, two brief seasons of excavations were undertaken. The first was in April and reported in the *Annual Report* for 1991–92. The second season of excavations took place during October 1992, precisely between October 4 and 26, a total of 18 days of excavation. These two seasons have transformed the old concept of the “archaeological season” into what might be styled an “excavation seminar.”

This academic analogy depends on fine timing, smooth logistics, and willing colleagues and students. This has been possible only with the enthusiastic assistance of Dr. Safwan Tell, Director General of Antiquities. Logistical support was

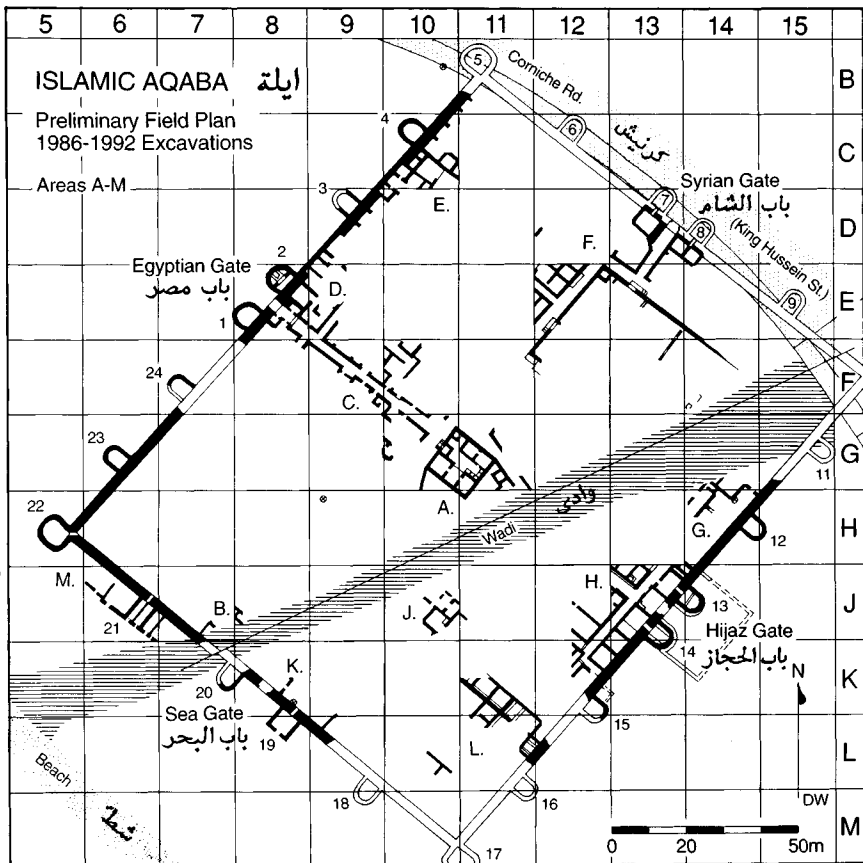


Figure 1. Plan of the excavations at Aqaba from 1986 through 1992

due to the special attentions of Drs. Pierre and Patricia Bikai of the American Center of Oriental Research, who managed the complexities of a USAID grant for archaeological research at Aqaba. Logistics in Aqaba benefited from the good offices of Mr. Bassam Kakish and Mr. Mohammad Balgar of the Aqaba Region Authority. Crucial to the actual excavations were the assistance of Ms. Sausan Fakhury and Mr. Mohammad Frahat of the Aqaba Office of the Department of Antiquities; these two individuals not only helped with daily affairs but also proved to be energetic and talented excavators. Our highly specialized and trained staff consisted of four archaeologists: Robin Brown (who completed her doctorate with specialization in Islamic archaeology), Juma' Kareem (who has now finished his doctorate in Berlin with Hans Nissen), Ted Lagro (a Dutch colleague in this same field), and Tim Harrison of the Oriental Institute (a fine archaeologist but not yet completely converted to the study of Islamic artifacts). Our surveyor was David Goodman, well known to our Egyptologists, especially those concerned with the Giza plateau; his task was to correct the myriad small errors which had accumulated over the years and to give them a pharaonic accuracy. We employed about twenty-seven local laborers. With cooperation from the Department of Antiquities, the Aqaba Region Authority, and the American Center of Oriental Research, we attacked the antiquities and, before the site knew what was happening, we obtained our scientific and historical information.

The spring season had a "practical purpose," the preparation of the area of the Syrian Gate for the building of the Ayla Orientation Center. Likewise, the fall season was intended as "site enhancement," embellishment of the ruins as a tourist monument. Two projects were selected for these visual goals, the clearance of an entire street and the clearance of the city wall above the beach. Happily, both projects have resulted in a clearer impression of the city ruins for the visitor, while providing dramatic new information on the archaeological history of Ayla.

THE EGYPTIAN STREET

The Egyptian Street takes its name from the Egyptian Gate, that is, the northwestern gate of the city (see general site plan, fig. 1). The street was one of the four axial thoroughfares connecting the gates with the Central Pavilion; it presents the longest street uninterrupted by the wadi. The Egyptian Gate and the inner arch were architectural elements of the original town plan, probably forming a vestibule; this space was reorganized as part of the street in the eighth century. Subsequently, the vestibule held a series of small shops which continued through and to the exterior of the city gate. Discussion of this complex area will be considered in *The Gates of Ayla*, the first of a monograph series on the Aqaba excavations, which is currently in preparation.



Figure 2. General view of the Egyptian Street looking from the gate toward the southeast

The inner arch was discovered in 1987 (E8d-1) and its southeastern side was excavated as part of a reconstruction in 1989 (E8d-31–35). This reconstruction exactly duplicates the arch as it was found and, being made of cement, can now carry the weight of a man and loaded wheelbarrow, as we had occasion to discover (shown in foreground, fig. 2). This stratigraphic sequence from the 1989 excavations shows, beneath a recent sand deposit (to be discussed below), refuse amidst stone fall (E8d-31, 32), generally undifferentiated from lower depositions on the latest street level (E8d-33, 34, 35). Much of this refuse and stone fall may be associated with the 1068 earthquake, associating the materials discovered with phases D (950–1050 A.D.) and E (1050–1100 A.D.) in the history of the site.

The beginning of Egyptian Street, within the inner arch, had radically different histories on either side (see plan, fig. 3). On the southern side was another smaller street leading toward the southwest. This was poorly preserved due to modern digging—in fact we had almost 2 m of wind-blown sand mixed with distinctive artifacts, port bottles, and porcelain crockery from the officers' mess of the British army camp. Happily, this modern disturbance was limited in area. The northern side of the street had a very fine building, which was flanked by another smaller street leading toward the northeast. The building had a large doorway, but its chief characteristic was the use of alternating courses of black basalt and white limestone for its decorative facade. The soft limestone had a number of scratched graffiti, including several “stars of Solomon”; this indicates that building is preserved at least to shoulder height and probably belongs to the early Abbasid period (phase B, 750–850 A.D.).

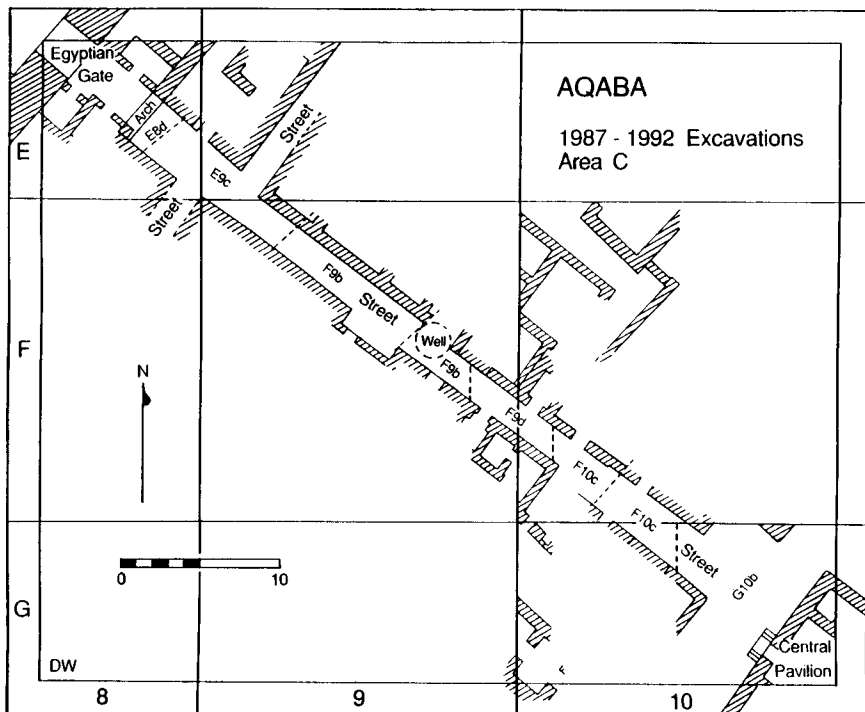


Figure 3. Plan of the Egyptian Street (Area C)

The excavations cleared the area to an average depth of 1.5 m and revealed the latest buildings fronting the street. Two large residences are indicated by doorways on the southern side of the street and one on the northern side (all in area F9b). Unfortunately a modern well obscured what might have been another side street. The general character of these structures suggests residential units of the late Abbasid or Fatimid periods. A deep probe in F9d, conducted in 1987, revealed that the original Umayyad street was much wider; rather, the successive rebuildings of structures along the street tended to encroach on the street. In general, the quality of the architecture of this latest period declines as one moves to the east of the Egyptian Gate, with increasing construction in small cobbles and mudbrick as one approaches the center of the city. More frequent doorways suggest either smaller houses or shops (in F10c). There also seems to be a slight difference in construction on the northeastern and southwestern walls facing the street; the southern wall is more often made of stone, possibly due to the corrosive effects of the prevailing northerly winds.

It is now possible to walk down the late Abbasid Street and to visualize something of the character of this Islamic city. Several of the side streets were partially excavated to facilitate movement of visitors. While we know much more about the Egyptian Street, we have even more questions about the earlier structure of the city, which are only whetted with this superficial demonstration of its latest manifestation. We may stroll down the street looking at the walls and doorways (or just the tops of them) and are left curious about what was behind them.

THE SEA WALL

The clearance of the city wall fronting the beach was a hardship post; not only were the trenches shaded by numerous palm trees but the proximity of the turquoise blue water softly beckoned as it lapped upon the hard white sand. Heroic devotion to archaeology was truly revealed—and tested—by the frolicking of bathers and particularly the appearance of the occasional bikini. Among the trees was mounding that contained the city wall covered with up to 2 m of sand and modern debris. We slowly removed this over-burden, pedestaled the palms, and revealed the entire southwestern face of the city wall (see general plan, fig. 4).

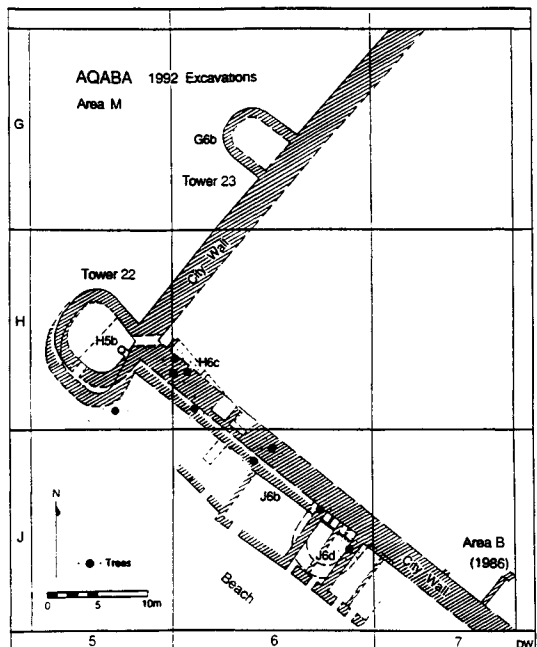


Figure 4. Plan of the southwestern corner with the Suq and Tower 22 (Area M)

The location of the corner tower was known, more or less, from the efforts of John Meloy in 1989; John had cleared some surface sand and had mapped the walls of the tower. We bisected the tower (Tower 22) and excavated the south-eastern half (fig. 5). This gave us a good section revealing burnt debris from the 1068 A.D. earthquake and earlier Abbasid floors. The original foundations were found and a paved surface associated with the passage into the city. This diagonal passage, entered through a pointed arch, was actually a crawl space less than



Figure 5. Excavation of the corner tower (Tower 22) before the discovery of the Suq

a meter wide and only slightly more than a meter in height (confirming the size of similar passages revealed in towers 2, 7, 13, 19, and 21). The external shape of this tower is now known to be early Islamic and not late Roman as some have reconstructed it. Inside the corner tower was an engaged column, part of the original building; the column was standing to its capital but leaning dangerously (the upper portion was removed and placed in Aqaba castle). A similar carved stone was found outside the tower (see fig. 6). The Abbasid phase of the tower seemed to have an exterior doorway facing the beach, but this could not be proved.

The reason for this was that the upper portion of the walls nearest the beach had slumped outward, literally shifting off their foundation (see fig. 4). As we moved eastward from the corner tower, we observed this slumping was a constant phenomenon along this wall, including the wall of the interval Tower 21. Some shifting and rebuilding might be expected as storms battered the sea wall over the centuries, but another explanation seems to have more force. The history of Ayla witnessed two very powerful earthquakes, that of 748 and another in 1068 (the latter with its epicenter in the Gulf of Aqaba). Recent conversations with Jordanian geologists revealed that Aqaba is one of only a few locations where the

proximity of groundwater and soil factors lead to the process of liquefaction during an earthquake. Like the bay area of San Francisco a few years ago, the soil becomes like jello, allowing slumping and possibly massive subsidence of walls and buildings of the city.

THE ABBASID SUQ

The city plan indicates that an interval tower (Tower 21) should be located on the western bank of the wadi. After clearing almost 2 m of debris from the slope we found the face of the wall and the substantial walls of the tower (fig. 7). It was a bit of a shock

to see that the tower had two external doorways facing the beach and was, in fact, rectangular in plan. This situation immediately recalls parallels with the Square Tower excavated in 1989. That tower (Tower 19) was rebuilt in the Abbasid period, actually immediately after the 748 earthquake, according to the tightly dated stratigraphy within the tower (this was described in the *1989–1990 Annual Report*, pp. 44–45). Tower 19 was rebuilt in square plan with a series of brick bins against the back and side walls and a doorway facing the beach.

The new interval Tower 21 has a brick partition wall separating the tower into two equal rooms each with brick bins in the rear wall. Large storage jars with impressed decoration were found in both these towers and in the corner tower (22) as well. All these elements or pieces of evidence fell into place on the next to last day of the excavations; Juma' Kareem proved his talent as an excavator by suggesting that this was a row of shops and proceeded to excavate along the outer face of the shop walls. By the end of the next day, he had uncovered four addi-



Figure 6. Carved limestone door jamb found in the vicinity of Tower 22



Figure 7. Excavation of the interval tower (Tower 21) before the discovery of the Suq



Figure 8. General view of the Suq and Tower 21, looking toward the east

tional doorways. We can now project a continuous series of small shops built along the beach and probably flanking both sides of the Sea Gate (fig. 8). Furthermore the stratification in Towers 19, 21, and 22 admits for an early Abbasid construction and continued use into the eleventh century. During this period, the city wall no longer functioned as such but became the backdrop for one of the suqs or markets of the Islamic city. What was sold from these small shops is a matter of debate; perhaps a few of them were concession stands for Abbasid tourists enjoying the beach at Ayla.

TO RETURN TO AYLA

The 1992 seasons of excavations have substantially filled in the overall plan of the early Islamic city, especially for the later phases. Gates and towers, streets and suqs, all are important aspects of the history of Ayla. The archaeological emphasis on the periphery has stemmed from a very practical consideration, to secure the limits of the site from modern developers. These worries are happily long past. The work on the streets and reconstruction efforts stemmed from another concern, to make the site interesting to tourists and—much more importantly—to make the citizens of Aqaba proud of this piece of their heritage. Happily the site is totally open and traversed by hundreds of people daily with practically no vandalism or accidental damage. The active efforts of Ms. Fakhury and Mr. Frahat of the new Office of Antiquities in Aqaba are largely responsible for these public relations. True “site enhancement” comes from this care and understanding, not from a few more dusty stone walls.

All the same, one is left with lacunae, almost as large as the Red Sea, in understanding the institutional elements in the history of the site. Other than elements of the Central Pavilion, we have failed to investigate any major, public

building within this city. The Pavilion Building, excavated in 1987, marked the crossing of the axial streets in the center of the city; this would appear to correspond to the tetrapylon of classical cities, manifest also in early Islamic foundations such as Anjar, in southern Lebanon. In its latest phase, this building was a residence of the Fatimid period, a detailed analysis of which has been published. Architectural fragments revealed in deep probes suggest that the earliest form of this building may have been a sort of open pavilion. Its association with a central administrative complex, perhaps an early Islamic governor's residence, is not unlikely.

To the northeast of the Central Pavilion was an enigmatic structure called the Large Enclosure, also excavated in 1987 (see site plan, fig. 1). Its long walls are distinguished by a hard, gray mortar; it was entered from two platforms with stairways and inside were three plastered columns, apparently *in situ*. A deep test showed gravel floors of the latest Abbasid building, beneath which was 2.5 m of Umayyad fill down to a fine plaster floor. The Large Enclosure may now be shown to have been rebuilt in the Abbasid period and encroached over the original axial street linking the Syrian Gate and the Central Pavilion. One institution would need enlargement and would be so important as to deflect a major street; our operating hypothesis is that this was the congregational mosque of the city, an expansion of the original mosque built by the Caliph 'Uthman ibn 'Affan. The size of this structure would be comparable to very early mosques and identical to that at Anjar. The orientations of such mosques vary considerably from true (astronomical) *qibla*; it is interesting to note that the orientation of Ayla is the same as the mosque of 'Amr in Fustat (Cairo; 127° SE). The similar orientations between Fustat and Aqaba suggest another possible comparison, an early spatial association of the mosque and the administrative complex (*Dar al-Imara*), suggesting that this complex will also be found in the northeastern quadrant.

The surveying by David Goodman in 1992 confirmed the formal plan that was followed in the foundation of this Islamic city; more importantly, his accurate plan added evidence of the impact of natural catastrophes, specifically the earthquakes of 748 and 1068. The disjuncture in alignment of the sea wall to the east and west of the wadi adds evidence that this is the hypothesized fault which split the site in two parts that slid past one another. The wadi, first assumed to have been excavated by the British army in 1942, may be shown to be antecedent to that war (from maps and photos, some as early as 1822). A working hypothesis is that the Jordan-Dead Sea transform fault may have become reactivated after the foundation of the city ca. 650 and that activity along the transform may have resulted in massive destruction during the 748 and 1068–70 earthquakes. The latter would then have been a precipitating cause of abandonment of the defenseless and ruined town before the Crusader attacks of 1116 A.D. The general inference is that the history of Ayla was linked with major regional seismicity.

However, distinctive indications of seismic damage are not clear; collapse orientation of walls does not seem to form a pattern at Aqaba. Numerous fractures were found in walls near the Egyptian and Sea Gates, in the interior of Tower 2, and in two early ashlar walls near the Syrian Gate. Whether these movements were caused by seismic action or slow settling of the architectural foundations is a matter of interpretation. Nevertheless, building and rebuilding on

the site can be dated fairly closely, the result of a large corpus of stratified evidence. Mahesh ware, a clear indicator of transitional Umayyad/Abbasid style datable to the mid-eighth century, consistently occurs in conjunction with new floors and walls, both renewed structures and new designs. Thus, extensive architectural reconstruction accompanied an event, presumably the quake of 748.

One of the more troubling problems of the excavations is the height of the water table, generally about 4–4.5m below present surface. Each case of rapid excavation below the current water table has revealed at least an additional meter of architecture below the water. Although sea level is currently rising and it is likely that the modern water table (fresh) is higher than the early Islamic one, this rise is quite slow (probably less than 2 m in the last 2000 years). An alternate explanation is that the architectural evidence indicates major subsidence of the Islamic town.

The architectural elements and geological changes are only two of the many factors concerning the history of this city. And their discovery is only the first phase of research. During this past year, the author has produced articles on the 1992 season (published in the *Annual of the Department of Antiquity of Jordan*), on “Glazed Ceramics of the Abbasid Period” (published in the *Transactions of the Oriental Ceramic Society*), “Ayla in the Balance” (glass and bronze weights; accepted by the *American Journal of Numismatics*), “Two Glass Medallions; Sasanian Influence in Aqaba” (submitted to *Iranica Antiqua*), “Out of Arabia: Influence of the Culture of the Hijaz in Aqaba” (to be published by the Institut français de archéologie orientale), two articles expounding the theory of Aqaba as a *misr* or early Islamic city, and two general articles published in *The American Journal of Archaeology* and *Syria*. One of the Jordanian students from the spring season of 1992, Ansam Malkawi, has published an article, “Pottery Kiln in Aqaba,” in the *Newsletter of the Institute of Archaeology and Anthropology, Yarmouk University*.

For the next year, three immediate projects are planned: the first will be a monograph, *The Gates of Ayla*, which will present the excavations of the four gates and several towers as a detailed exposition of the stratigraphic sequencing of each artifact category and the architectural and historical context of this urban framework. The second will be a revised edition of the 1988 booklet, *Aqaba—Port of Palestine of the China Sea*; this is apparently out-of-print, though Arabic and French editions are still available. Production of this booklet is planned to coincide with a small exhibition in the Oriental Institute Museum, the third project, that will show the many fine objects recovered between 1987 and 1992. Like the first Aqaba exhibit, this material will be sent to Jordan and will eventually augment the somewhat dated exhibits in the Aqaba Museum. This program of research and presentation has been made possible through the generosity of the sponsoring institutions, the government of Jordan, and most immediately, the contributions of members of the Oriental Institute.
