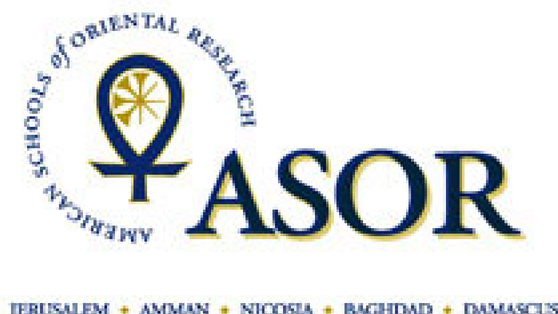

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PALESTINE IN THE EARLY ISLAMIC

Luxuriant Legacy

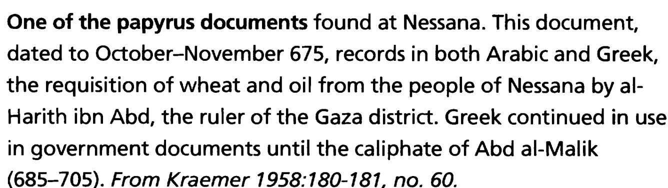
By Robert Schick

Surveying the time period from the Islamic conquest in the 630s CE up to the arrival of the Crusaders in 1099 CE, this article will cover the geographic area of modern-day Jordan and Israel including the West Bank, here grouped together under the name "Palestine." Alternative terms such as "southern geographical Syria," or its Arabic equivalent "southern Bilad al-Sham," are too clumsy to use here.

The archaeology of Palestine in the Early Islamic period is a broad topic which has attracted increased attention within the last ten to fifteen years (see Whitcomb 1995a for a recent summary). It is hardly feasible to cover all possible aspects of the topic or even mention the hundreds of archaeological sites with excavated remains from the Early Islamic period, but I will attempt to provide a survey.

PERIOD

Umayyad mosaic from Qaṣr Hallabat showing a sheep, goat and ostrich at the bottom. Above is a hunter carrying a rabbit and leading an ostrich, with another ostrich to the right. Next come a snake with a human head and an upside down bird, with a lion and zebu at the top (see Bisheh 1993). *Photograph courtesy of Michele Piccirillo.*



One of the papyrus documents found at Nessana. This document, dated to October–November 675, records in both Arabic and Greek, the requisition of wheat and oil from the people of Nessana by al-Harith ibn Abd, the ruler of the Gaza district. Greek continued in use in government documents until the caliphate of Abd al-Malik (685–705). *From Kraemer 1958:180-181, no. 60.*

History of the Early Islamic Period

The events of the Early Islamic period took place in the light of recorded history. While the purpose of this article is not to rehearse the historical events of the period, it is necessary to keep in mind the broad outlines of the historical developments in this nearly five-hundred-year period.

The Arabic historical sources provide the basis for a study of the history of the period. Little has been translated into English; a notable exception is the multi-volume history of al-Tabari (1985-96), extending up to 915 CE (all dates CE unless noted). Unfortunately, the early Arabic historians in general focused their attention on events in Iraq, which was the center of the Islamic caliphate in the Abbasid period, to the comparative neglect of events in the provinces, such as Palestine. Thus it is difficult to write a connected study of historical events in Palestine. The Arabic historical and other abundant literary sources can, however, be studied to great advantage for social history, as Ahsan did (1979).

The thousands of documents recovered from the Geniza of the synagogue in Cairo are another major source of information, especially for the Jewish communities in the Fatimid period (see Goitein 1967-88). The only other collections of documents to have survived from the early Islamic period are several dozen papyri from Nessana, dating through the end of the seventh century (Kraemer 1958) and the smaller number of papyri from Khirbet al-Mird, dating from the seventh to tenth centuries (Grohman 1963). Those papyri, along with the larger number of papyri from Egypt, provide documentary evidence for the institutionalization of the Islamic state as early as the reign of Muawiya, the first Umayyad caliph (Donner 1986).

Some modern historians have turned their attention to the Early Islamic period in Palestine. The best study of the general historical events of the period is by Gil, recently translated into English (1992), which makes major use of the Geniza documents. The general study by Salibi includes all of Syria (1977), while Kennedy covers the wider Islamic world (1986). The two volumes by Bianquis (1986-89) do full justice to the Fatimid period.

The Islamic Conquest and Umayyad Period

The Early Islamic period began with the Islamic conquest in the course of the 630s. The conquest of Palestine took the Muslims several years from their initial invasion in 634 through the decisive battle of the Yarmuk in 636 and the fall of Caesarea in 640.

The Islamic conquest did not create extensive destruction or long-lasting disruption. The major battles of Ajnadayn, Fihl, and the Yarmuk took place in the countryside, and most of the cities surrendered on terms to the Muslims, with or without undergoing sieges. Many of the details in the lengthy versions of the capitulation agreements recorded in the Arabic sources are not reliable; they are projections back to the time of the Conquests of the systematized legal formulations that the Muslim jurists developed in the Abbasid period. But it is clear that the Muslims did not sack and destroy the cities

they captured as a matter of course. On the contrary, archaeological evidence for destruction that the Muslims caused is hard to come by.

One case of destruction may be the city of ʿAvdat in the Negev, although it is very difficult to evaluate the evidence due to the dearth of published details (Negev 1983:181-86, 225-26; 1982; Mayerson 1964). A wide-spread ash layer shows that fire destroyed the city of ʿAvdat sometime after 22 September 617, the date of the latest burial in the south martyrium of St. Theodore. The Muslim invaders are possible culprits, but why they would have destroyed ʿAvdat, and not any of the other neighboring settlements, such as Shivta or Nessana, remains obscure.

The historical sources also record that the Muslims sacked Caesarea once they captured the city in 640 after a long siege. There is little, if any physical evidence for any associated destruction (Holum 1992), although the Umayyad city was sharply reduced in size.

In northern Jordan at Riḥab, the mosaic floors in the churches of Prophet Isaiah and Menas date to 635 (Piccirillo 1994:310, 313). At Khirbet al-Samra the mosaic floor in the church of St. George dates to 637, while the mosaic floor in the church of St. John the Baptist dates to 639 (Piccirillo 1994:304-6). These dates are the precise years of the Muslim conquest. Construction of churches dedicated in 635 would have begun before the Muslims first invaded in the summer of 634. However, their continued construction and completion prior to the battle of the Yarmuk in the summer of 636 indicates that the inhabitants neither fled as refugees nor were killed off by the Muslims, but were undisturbed by the fact that the Muslims were conquering them

This absence of destruction caused by the Muslim invaders notably contradicts the accounts of the Muslim conquest recorded in the hostile Greek literary sources. In January of 635, the Patriarch Sophronius delivered the Epiphany sermon on baptism in which he complained that the Saracens were plundering cities, devastating fields, setting villages on fire, burning churches, and overturning monasteries (Sophronius 1991:205).

After the conquest, the situation soon stabilized under the rule of Muʿawiya, the founder of the Umayyad dynasty in 661. The region was generally peaceful. For the most part Palestine lay outside the areas of the fighting during the first civil war between ʿAli and Muʿawiya (656-61) and later the second civil war between Yazid and ʿAbd al-Malik and the rival caliph ʿAbd Allah ibn Zubayr (681-92). However, the fighting during the second civil war gave the Byzantines an opportunity to raid and recapture for a few years some of the coastal cities, such as Caesarea and Ashkelon (Hitti and Murgotten 1916-24:1:219-20).

In the Umayyad period Palestine occupied the core of the Caliphate and benefitted from direct patronage by the caliphs resident in the capital Damascus, who sponsored numerous building projects. ʿAbd al-Malik, for example, constructed the Dome of the Rock in Jerusalem, dated to 691-92, while his successor al-Walid built the al-Aqsa mosque in the

The Umayyad Dome of the Chain with the Dome of the Rock in the background at the center of the Haram al-Sharif in Jerusalem. The enigmatic Dome of the Chain has been recently renovated and reopened to the public. In this period, Palestine stood at the center of the Damascus-based caliphate and received much attention. *Author's photo.*

710s. Sulayman ibn ʿAbd al-Malik, the governor of the province of Filistin from 705 to 715 and later caliph from 715 to 717, founded the new city of al-Ramla to serve as the administrative capital. The caliphs and other members of the ruling Umayyad family frequently visited Palestine, and a number of palaces attest that they were resident.

Palestine suffered grievously from an earthquake, now datable to January 749 (Tsafrir and Foerster 1992). Major evidence for this earthquake can be seen clearly at a number of sites, notably Beth-Shean and Pella.

The early Islamic period experienced periodic plague outbreaks during its course such as the outbreak of the plague that began at the Muslim camp at ʾAmwâs (Emmaus) in 638-39. These were particularly severe between the mid-sixth and the mid-eighth centuries (Conrad 1981).

Only in the last years of the Umayyad caliphate were there extended tribal rebellions in Palestine. The area quickly fell into the hands of the Abbasid revolutionary armies in 750, without any major pitched battles or lengthy sieges.

The Abbasid Period

Historians debate the extent of the impact of the Abbasid revolution in 749-50 on Palestine. The Abbasids transferred the center of the Islamic caliphate to Iraq, where they founded Baghdad in 762. Scholars have argued that this shift of the center of the caliphate from Syria to Iraq led to a rapid economic decline and drop in population, especially in the cities, as Palestine now became a backwater. Such an attribution of large-scale urban decline and abandonment of archaeological sites to the Abbasid Revolution, common among archaeologists until recently, has been sharply criticized by Walmsley (1992a).

But the Abbasid Revolution was more than just a coup d'état. It marked the end to the importance of the Arab tribes, who had been the main support for the Umayyads. In the

△ **The Ikhshidid-period mosque** at Yaqin, east of Hebron. While the building is of no particular architectural interest, the inscription over the door records that it was built by the otherwise unknown local ruler Muhammad ibn Ismaʿil al-Sabahi in September 963 to commemorate the place from which Abraham witnessed the destruction of the people of Lot and uttered, "This is certain justice" (*yaqin* in Arabic). *Author's photo.*

▽ **An Arabic inscription** recording the establishment of a pious endowment of two houses in Jerusalem in 1054 by the ruler of Diyar Bakr in eastern Turkey to aid pilgrims coming to Jerusalem from Diyar Bakr (Burgoyne 1982). The Persian traveller Nasir-i Khusraw had come to Jerusalem from Diyar Bakr just a few years earlier in 1047. The inscription is a rare surviving bit of physical evidence for Jerusalem in the Fatimid period and shows an early presence of the Seljuq Turks, who had only recently arrived on the historical scene of the Middle East, a couple of decades before their conquest of Palestine. *Author's photo.*

future, they played only a limited historical role, mostly as rebels. The shift of the center of the Islamic caliphate to Iraq and Baghdad did clearly reduce the importance of Palestine. Only the first few Abbasid caliphs ever visited the area, even briefly—al-Mansur in 758 and 771, al-Mahdi in 780, and probably al-Mamun in 831.

Direct caliphal sponsorship of building projects in Palestine immediately ceased, clearly by the choice of the rulers. When he visited Jerusalem , al-Mansur pleaded a lack of funds for repairing the al-Aqsa mosque in Jerusalem, the most important Islamic site in Palestine (Le Strange 1890:92-3). However, he had plenty of money to lavish on the construction of the city of Baghdad, begun in 762. Among the very few prestige projects that the Abbasid rulers undertook in Palestine was the construction of a minaret and mosque in Ashkelon in 771-72 by the future caliph al-Mahdi (Combe, Sauvaget, and Wiet 1931-56:1:32-33, no. 42).

The central Abbasid government soon lost the ability to control the area effectively, leading to a general breakdown in security, manifested by rebellions and tribal conflicts at the end of the eighth century. During the civil war from 809 to 813 between the successors to Harun al-Rashid, the political situation worsened. The hostilities affected Palestine, as everywhere else in the caliphate. Repeated sacks of the monasteries in the Wilderness of Judea are reported (Turtledove 1982:165, 176, 180), from which they never fully recovered. More tribal or peasant rebellions appear in the accounts of historical events of the mid-ninth century, including a major rebellion in 841.

When Ahmad ibn Tulun, the quasi independent ruler in Egypt since 873, took control of Palestine in 878, the region slipped out of direct Abbasid control (Bacharach 1984). This change had several long-term effects. It brought Palestine closer to the central government in Egypt, leading to renewed attention to the infrastructure of Palestine, such as the fortification of the harbor of Akko, by the grandfather of the geographer al-Maqdasi (Le Strange 1886:30-31). The Tulunids established a political state in Egypt which was independent of the Abbasids in Iraq, making Palestine the border area between these two states. Earlier Palestine had seen its share of tribal conflicts and rebellions against the central government, but it was now the scene of periodic warfare between powerful states, with an increased level of associated destruction.

Tulunid rule disintegrated in the wake of raids around 900 and 906. The Qarmatians, extremist Shiites supported by some of the Arab tribes in Syria, led these raids, and sacked Tiberias and other places in 906. In the aftermath of those Qarmatian raids, Palestine once again came under more direct Abbasid control up to 935. Yet conditions continued to deteriorate due to further Qarmatian raids. Renewed caliphal interest in building in Palestine was confined to repairs of the Haram in Jerusalem.

Muhammad ibn Tughj had been the governor of Palestine since 928, and in 931 he became the governor of Damascus. He soon took power in Egypt in 935 and became an independent ruler, much like Ibn Tulun in the previous century. Muhammad ibn Tughj, known by his title as the Ikhshid, and his Ikhshidid successors controlled Palestine between 935 and 969. During this time Palestine reverted to a battleground between the Abbasids and the Ikhshidids.

A rare example of building construction in the period is the mosque at Yaqin. Located southeast of Hebron, it was dedicated in September 963 (Combe, Sauvaget, and Wiet 1931-56:4:183-84, no. 1561), commemorating the site where

Abraham witnessed God's destruction of the people of Lot. Many of the Ikhshidid rulers in Egypt were buried in Jerusalem (Van Berchem 1922-27: Haram:11-15, no. 146). Renewed Qarmatian raids marked the last years of Ikhshidid rule, making the impending Fatimid takeover easier.

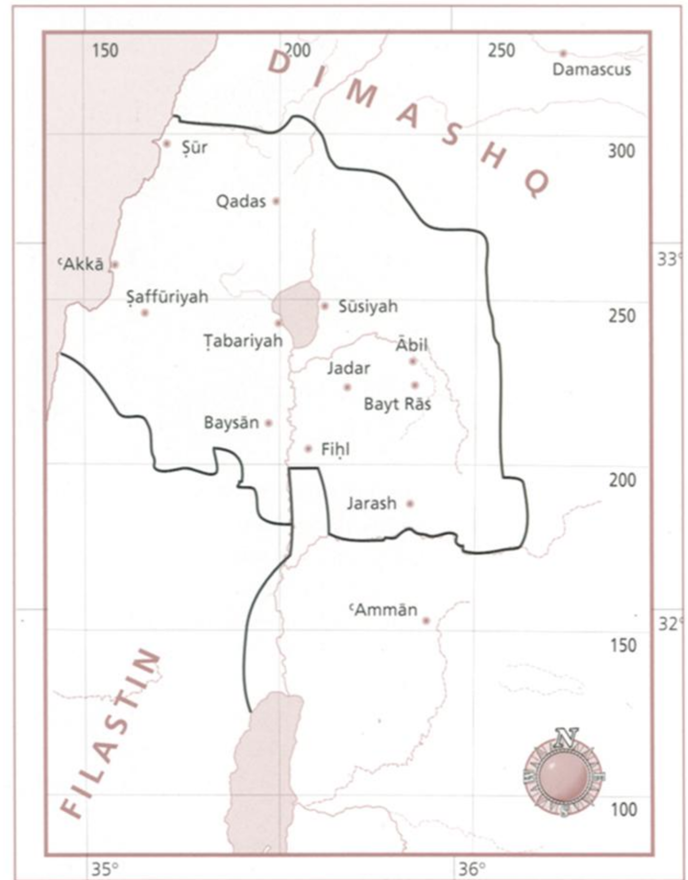
The Fatimid and Seljuq Periods

The Fatimids from North Africa ousted the Ikhshidids in Egypt in 969 and invaded Palestine the following year. This ushered in a further lengthy period of warfare in Palestine between the Fatimids and their foes, the Arab tribes—the Syrian Banu ʿUqayl, led by the Hamdanids, and the Palestinian Banu Tayyʾ led by the Jarrahids—the Qarmatians, Turks, and Byzantines, in an ever-shifting array of alliances. The Fatimid victory over the Jarrahids in the Battle of Uqhuwana in 1029 led to a more or less stable forty years of Fatimid rule up to the Seljuq Turk invasion in 1071. That invasion began a further generation of chronic political turmoil and conflict, including a bloody rebellion against the Seljuq ruler Atsiz in 1078. The Seljuqs supported Sunni Islam in opposition to the Shiite Fatimids. Jerusalem saw a momentary revival of Sunni theological learning before the Fatimids briefly retook control over Palestine in 1098, only to lose it a few months later to the Crusaders. During the period, the coastal cities remained in the hands of the Fatimids, and they offered greater resistance to the Crusaders. After their capture of Jerusalem and massacre of its population in 1099, the Crusaders laid siege to the coastal cities one by one over the following couple of decades. The last port, Ashkelon, fell to the Crusaders in 1153, bringing an end to Fatimid rule in Palestine.

There is little to be gained here by detailing the ebb and flow of the conflict in Palestine (see Bianquis 1986-89; Gil 1992). For much of the Fatimid period, Palestine was under the effective control of the Arab tribes, led by the Jarrahids, with varying degrees of at least nominal allegiance to the Fatimids. But at one point in their long conflict with the Fatimids, the Jarrahids gained control of the southern districts of Syria for a two and a half year period between 1011 and 1013, until a Fatimid military campaign reestablished their control. During this period the Jarrahids set up their own caliphate to rival the Fatimids, and they minted coins in Palestine in the name of their rival caliph Abu al-Futuh al-Hasani al-Rashid li-Din Allah (Bianquis 1986-89:301-7; Gil 1992:382-83).

These political-military events were of an ephemeral nature, and no excavator has proposed having found any direct evidence for any specific incident. For example, the historical sources report that the capital city of al-Ramla changed hands repeatedly, often accompanied by a sack, but archaeologists have done little investigation there.

The extent to which the chronic, debilitating political and military instability affected the population can be debated. On occasion the annual hajj caravans to Medina and Mecca both from Syria and from Egypt had to be canceled due to the general insecurity, but long-distance trade continued, as it did even during the Crusader period. This trade



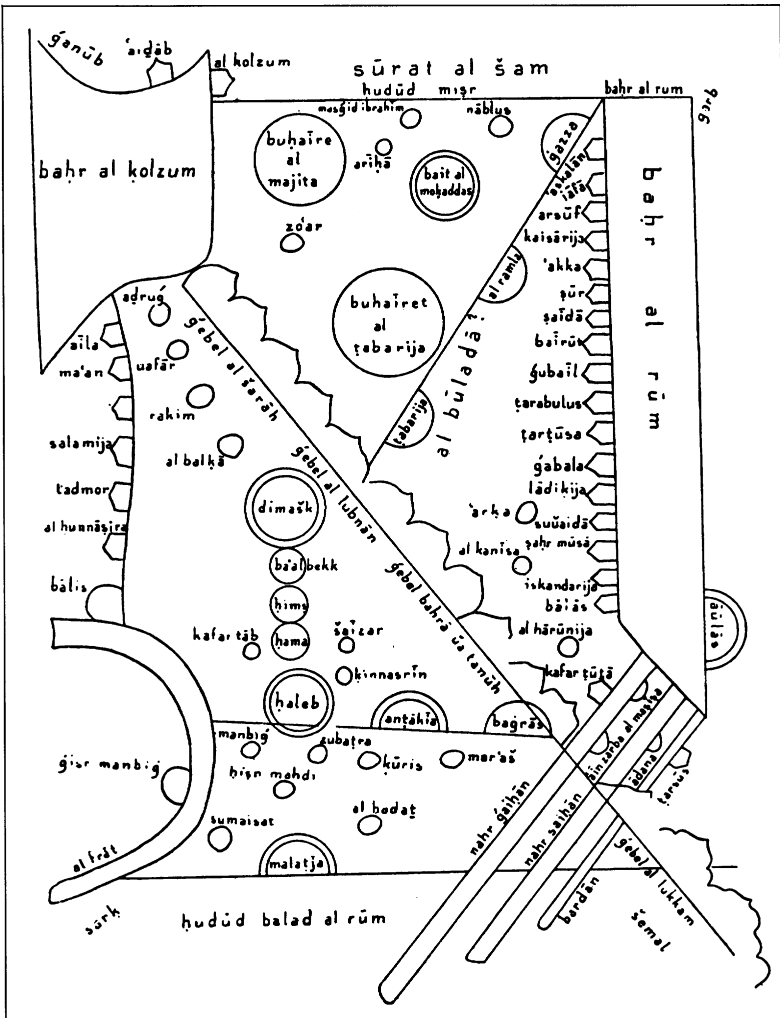
Map showing the boundaries of the early Islamic provinces of Dimashq, Urdunn (at center), and Filastin, and some the cities mentioned in the geography of Ibn Khurdadbih whose district list offers our earliest records. *After Walmsley 1987.*

in the Fatimid period seems increasingly to have been reoriented to Egypt as opposed to Iraq.

The sources report occasional earthquakes, including a particularly severe one in 1033-34 and another in 1068 (Amiran, Arieh, and Turcotte 1994; Amiran 1996; El-Isa 1985). The Amman citadel is one site where the excavator has identified strata breaks with those historically attested earthquakes (Northedge 1991).

In 1009-10 the Fatimid caliph al-Hakim bi Amr Allah ordered the destruction of the Church of the Holy Sepulchre in Jerusalem as part of a general persecution of Christians. This was an exceptional case of persecution and destruction at the hands of the rulers, rather than the result of mob riots. The Byzantine emperor Constantine IX Monomachus rebuilt the damage years later in 1048. The rebuilding shifted the main entrance of the church from the east to the south, where it remains today.

The Shiite Fatimid rulers took an interest in building religious shrines, especially in commemoration of ʿAli ibn Abi Talib and his descendants. The head of Husayn was buried at the shrine in Ascalo. A pulpit was built for the shrine in 1091, but was later taken to Hebron (Combe, Sauvaget, and Wiet 1931-56:7:259-60, nos. 2790, 2791; Vincent and Mackay



A drawing of a medieval map showing Syria-Palestine accompanying a manuscript of al-Balkhi, an early tenth-century geographer. As with other Islamic maps, south is at the top. The line of cities along the Mediterranean Sea is on the right. A chain of mountains extends from the Red Sea in the upper left corner to Cilicia in the lower right corner. The Jordan River is not shown between the Dead Sea *(buḥaire al majita)* and the Sea of Galilee *(buḥaīret al ṭabarija)*. *From Miller 1994:23.*

1923:219-50). Other examples include the tomb shrines of the martyrs killed in the battle of Muʾta at Mazar in central Jordan in 629 between the Byzantines and the Muslim invaders: Jaʿfar ibn Abi Talib (ʿAli's older brother), Zayd ibn Haritha, and ʿAbd Allah ibn Rawaha al-Ansari (Combe, Sauvaget, and Wiet 1931-56:2:98-99, no. 540). The mosque of Lot at Bani Naim (Combe, Sauvaget, and Wiet 1931-56:5:79-80, no. 2148) and the nearby tomb of Umm Salma, Fatima, the daughter of al-Husayn b. ʿAli b. Abi Talib in Yaqin, date to around 1010, during the reign of the caliph al-Hakim (Combe, Sauvaget, and Wiet 1931-56:5:81-82, no. 2151).

Historical Geography

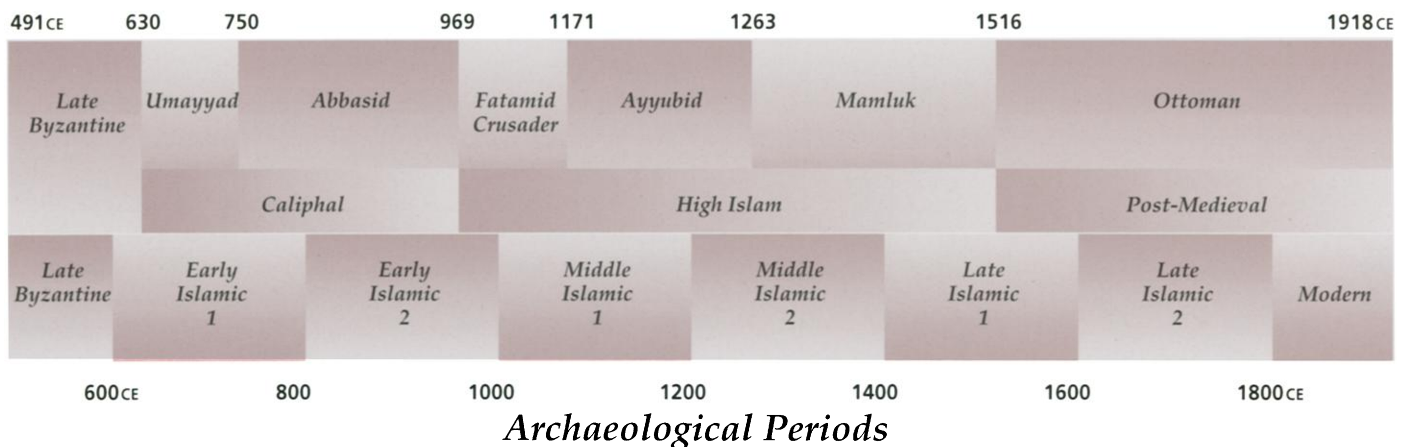
In addition to the accounts of historical events in Palestine and the records of building inscriptions, the writings of the Arab geographers give much information. While only a few of the couple dozen geographical works from the Abbasid and Fatimid periods have been translated into English, their contents have been conveniently collected by Le Strange (1890).

The earliest significant geographical work is the *Book of Roads and Kingdoms* by Ibn Khurdadbih. Written in 847 and revised in 885, it was a manual on the regions, administrative divisions, and roads of the Islamic caliphate. Al-Baladhuri's, *Book of the Conquest of the Lands*, written around 869, is an historical account of the Islamic conquests, and provides much information about places and administrative divisions (Hitti and Murgotten 1916-24). The fullest geographical account of Palestine is the *Book of the Best Divisions in Knowledge of the Regions*, written by al-Maqdisi (al-Muqaddasi) about 985. While his work offers a geographical account of the entire Islamic world, he gives extensive coverage to his native Palestine (Le Strange 1886). Nasir i-Kusrau's *Book of Travels*, an account of his journey in 1047, provides a different slant on Palestine (Thackston 1986). He describes only those places that he personally passed through on his way to the Hijaz on pilgrimage, thus providing reliable information. The accounts of Christian pilgrims give further information about places in Palestine (Wilkinson 1977), notably the accounts of Arculf around 675 and Willibald around 865. Their attention is focused heavily on the Christian holy places; the Muslim population is largely invisible.

The geographical works provide information about the administrative districts, major cities, towns, and other places in Palestine (conveniently analyzed by Walmsley 1987, 1991). The cities quickly lost their Hellenistic names and reverted to their earlier Semitic names, e.g., Baysân-Beth Shean rather than Scythopolis. In the case of Jerusalem, the name Iliyâʾ, derived from the Hadrianic Aelia Capitolina, went out of use only gradually, replaced by the name al-Quds, an abbreviated version of the name Bayt al-Maqdis. The Muslims established their own civil administration that was only roughly similar to the Byzantine system. The Umayyads divided Syria-Palestine into military districts (*jund*—plural *ajnad*). Incorporating Palestine were the *Jund* of al-Urdunn, with its capital at Tiberias (replacing Beth-Shean, the capital of the Byzantine province of Second Palestine), the *Jund* of Filistin, with its capital first at Lod and later at al-Ramla (in place of Caesarea, the capital of Byzantine First Palestine), and the southern part of the *Jund* of Dimashq, with its capital Damascus (in place of the Province of Arabia, with Busra its capital). These military districts were subdivided into smaller administrative districts (*kura*).

The geography of Ibn Khurdadbih includes the earliest list of those districts. Within the *Jund* of al-Urdunn, comprising the Galilee and portions of northwest Jordan, the districts were: Tabariya (Tiberias); al-Sâmira (Samaria); Baysân (Beth-Shean); Fihl (Pella); Jarash (Jerash); Bayt Ras (Beit Ras); Jadar (Umm Qais); Abil (Abila); Sûsiya (Sussita); Saffûriya (Sepphoris); ʿAkkâ (Accho); Qadas (Kedesh); and Sûr (Tyre).

The districts of the *Jund* of Filistin, comprising the rest of Palestine west of the Jordan River were: al-Ramla; Iliyâʿ (Jerusalem); ʾAmwâs (Emmaus); Ludda (Lod); Yubna (Yavne); Yâfâ (Jaffa); Qaysâriya (Caesarea); Nâbulus (Nablus); Sabastiya



Whitcomb's proposed archaeological periodization for the Islamic periods. There is no consensus concerning the archaeological periodization of Palestine. *From Whitcomb 1992:386.*

(Sebaste); ʾAsqalân (Ashkelon); Ghazza (Gaza); and Bayt Jibrîn (Beth Guvrin).

Within the portion of the *Jund* of Dimashq that covered most of the area east of the Jordan River, the districts were al-Jawlân (Golan); Zâhir al-Balqâ (the uplands of the Balqa); Jabal al-Ghawr (the mountain of the Jordan Valley—i.e., Salt); Maâb (al-Rabba); al-Sharât (the mountains of southern Jordan); Busrâ (Bosra); ʿAmmân (Amman); and al-Jâbiya.

Over the centuries there were some adjustments to the districts. For example in the Fatimid period, southern Jordan seems to have been separated from the Jund of Dimashq and made a separate administrative unit (see Walmsley 1987).

Some maps survive that were part of the manuscripts of these geographical works (Miller 1926-27). For the most part they show the string of ports along the Mediterranean Coast and only a few inland sites. The maps record only a portion of the sites mentioned in the geographical accounts that they accompany. The objective of the maps was not to serve as a usable, realistic representation of the geography, but to aid a reader of the text, showing the relation between various locations.

Archaeological Periodization

Turning from political history and historical geography to archaeology, there is no consensus regarding the appropriate way to divide the Early Islamic period into archaeologically meaningful sub-divisions. One common practice is to use the name of the ruling dynasty—Umayyad, Abbasid, Fatimid—for the period names. But this becomes tricky during the unsettled conditions of the tenth and eleventh centuries: some scholars identify the period after 970 as Fatimid, while others call the entire period between 750 and 1099 Abbasid. The use of political terms for archaeological periods is problematic because it obscures the continuities in everyday material culture that remain unaffected by political events. The alternative use of century identifications tends to alienate historians. Whitcomb (1990, 1992) has proposed using the neutral terms Early Islamic 1 and 2; Middle Islamic 1 and 2, Late Islamic 1 and 2, but scholars have not widely accepted this practice.

History of Exploration

Before the First World War

When the scholarly study of the antiquities of Palestine got underway in the course of the nineteenth century, the Dome of the Rock was the first monument from the Early Islamic Period to attract attention. The area of the Haram al-Sharif (Temple Mount) in Jerusalem remained off limits to non-Muslims up to the middle of the century, but Frederick Catherwood was able to produce the first accurate plans of the Dome of the Rock, the el-Aqsa Mosque, and the Golden Gate in 1833-38. Scholars continue to write about the Dome of the Rock far more than any other Islamic monument.

In Palestine, archaeologists located most of the major early Islamic monuments during the surveys of the second half of the nineteenth century, but they did not always recognize the sites for what they were. For example, the participants in the Survey of Western Palestine between 1871 and 1877 speculated that Khirbet al-Mafjar, the eighth-century Umayyad palace just north of Jericho, might have been a monastery, and they identified another Umayyad palace, Khirbet el-Minya, north of Tiberias, as Capernaum.

Meanwhile in Jordan, explorers were able to make the first studies of Early Islamic monuments only after the Ottoman reestablished direct rule at the end of the century. Rudolf Brünnow and Alfred von Domaszewski travelled in southern Syria and Jordan in 1897 and 1898 in order to document Roman sites (1904-9), but they also recorded information about a number of early Islamic sites, including complete photographic coverage of the carved frieze at the palace of Mushatta. They photographed and planned other early Islamic desert castles and monuments such as the Amman citadel, Khan al-Zabib, Umm al-Walid, Qastal, and Muwaqqar. The Hungarian explorer, Alois Musil, also travelled

◁ **Exterior view** of one of the ornately decorated doors in the early eighth-century palace of Qaṣr al-Tuba in the eastern desert of Jordan. Construction of the palace was started but never completed by the Caliph Walid II. The use of brick for the vaulting, visible in the background, is unusual. While explorers documented the site in the 1920s, it awaits further study. *From Jaussen and Savignac 1922:pl. 11.*

▷ **Detail of the ornately decorated** frieze with animal and plant motifs on the exterior facade of the early eighth-century palace of Mushatta, south of Amman. The Ottoman sultan gave the facade to Germany at the time of the Kaiser's visit in 1898, where it remains on display in Berlin. *From Brünnow and von Domaszewski 1904–9:2:157, fig. 741.*

extensively in Jordan in the late 1890s and early 1900s, and his discovery of the eighth-century Umayyad bath and audience hall at Quṣayr ʿAmra, with its spectacular fresco paintings, was the most significant find of this phase of initial exploration (1902; 1907). A few years later, the French Dominicans, A. Jaussen and R. Savignac, from the École Biblique in Jerusalem, further documented the eighth-century desert castles in the eastern desert of Jordan that Musil had visited—Kharana, Qaṣr al-Tuba, and Quṣayr ʿAmra (Jaussen and Savignac 1922). Howard Crosby Butler led expeditions to Syria and northern Jordan to document Roman and Byzantine monuments in 1904-5 and 1909 (Butler 1907-21). His writings also included some information on the Umayyad desert palaces, such as Qaṣr Hallabat and Hammam al-Sarah. For Israel, there is no equivalent to these multi-volume publications of surveyed Jordanian monuments.

Archaeological excavations in Palestine began prior to the First World War, and a few of those pioneering excavations revealed remains from the Early Islamic period. At Taanack for example, excavated between 1902 and 1904, Sellin uncovered a large structure on the tell that he identified as an Arab fortress from the tenth to twelfth centuries (Sellin 1904:53-60).

Also at the end of the nineteenth century, Max van Berchem (1922-27) documented the Arabic inscriptions in Jerusalem during visits in 1888, 1893-94, and 1914.

After the First World War

After the First World War and the establishment of the British Mandate over Palestine and the Emirate of Transjordan, the nature of the scholarly study of the early Islamic period shifted from the initial exploration and recording of standing architectural monuments to excavation. Archaeologists excavated a number of early Islamic sites, often only because they were interested the earlier remains lying beneath them.

Beth-Shean was the first major excavation of an early Islamic site in Palestine. Between 1921 and 1923, Fisher's project uncovered extensive early Islamic and Byzantine remains on the summit, but the richness of the remains was poorly served by the all too brief publication (FitzGerald 1931; see also Zeyadeh's 1991 rephasing).

Crowfoot and Fitzgerald's (1929) excavation in the Tyropoean Valley in Jerusalem in 1927 uncovered extensive Islamic period remains, but their dating of the various phases was too early (Magness 1992). Excavation reports at other sites characteristically misdated Islamic period remains as Byzantine.

In the 1930s, the major excavation by Hamilton and Baramki at the early eighth-century Umayyad palace at Khirbet al-Mafjar, Jericho, uncovered spectacular architectural remains, which were well published (Hamilton 1959; 1988). They reported on other aspects of the excavation in only a rudimentary fashion. Baramki's report on the pottery led to Khirbet al-Mafjar becoming a type site for the Early Islamic period (Baramki 1942). However insufficient stratigraphic details obscured the evidence for continued occupation of the site after the 749 earthquake and up to the Mamluk period (see Whitcomb 1988a).

Between 1932 and 1939 the Germans Mader, Schneider (1952), and Puttrich-Reignard excavated Khirbet el-Minya,

the Umayyad palace north of Tiberias, and Grabar and Perrot dug there in 1959, but only preliminary reports were published (1960).

Renovations of the el-Aqsa Mosque in Jerusalem from 1938 to 1942 enabled Hamilton (1949) to study its architectural phasing.

Jerash was the first site in Jordan with Islamic period remains extensively excavated between 1928 and 1934 by J. W. Crowfoot, C. S. Fisher, C. C. McCown, and Carl Kraeling. The publication examines Classical and Byzantine period architectural monuments, mosaics, inscriptions, and glass, but contains virtually no information about pottery or other finds and has only limited concern for stratigraphic recording (Kraeling 1938). In general they ignored the Early Islamic remains. They consistently gave a too early dating to the remains, and for the most part they considered the Early Islamic remains to be Byzantine. It was only the renewed excavations of the early 1980s that revealed the full extent of the Early Islamic occupation at the site.

Nelson Glueck's surveys in Jordan in the 1930s pioneered the reliance on dating sherds collected on the surface of sites for determining the periods of occupation (1933-34; 1934-35; 1937-38).

At Mount Nebo in the 1930s, the Franciscans Sylvester Saller and Bellarmino Bagatti began excavating a large Byzantine monastery that continued in use into the Early Islamic period (Saller 1941).

The number of inadequately published excavations from the British Mandate period is large. Reports about the excavations at Shivta between 1934 and 1938, for example, include only a handful of single-sentence references to Arabic inscriptions from the ninth century and pottery up to the twelfth century (Baly 1935). Renewed studies have shown little improvement in providing information about the early Islamic period (Negev 1993:1405).

Between 1941-44 the Dominicans R. de Vaux and A. M. Steve excavated a caravanserai at Abu Ghosh (1950; de Vaux 1946). Their published corpus of later Abbasid and Fatimid period pottery was especially valuable.

Elsewhere in the Middle East, the Danish excavations at Hama in northern Syria between 1932 and 1937 were fundamental, and their published volume on pottery (Riis and Poulsen 1957) has served as the basic classification scheme for Islamic glazed pottery. In the 1920s the Germans excavated the ninth-century Abbasid capital at Samarra, in Iraq. This also had significance well beyond the region of Iraq, especially for the area of art history (Herzfeld 1923; 1927).

Creswell's comprehensive study of early Muslim architecture also belongs to the period before the Second World War (1932-40; abridged version Creswell and Allan 1989). Creswell covered all of the early Islamic monuments in the caliphate; for Palestine he included extensive discussion of the Dome of the Rock and the al-Aqsa Mosque in Jerusalem and all of the various Umayyad desert palaces. He excluded the Amman citadel and Kharana from his discussion because of their supposed Sasanian date.

General view of the Umayyad palace at Khirbet al-Minya, which has returned to an abandoned state of nature since the final excavation season in 1959. The site cries out for renewed excavation and tourist development. *Author's photo.*

After 1948

Jordan. In Jordan, the Department of Antiquities began the excavations of the Islamic remains on the Amman citadel in 1949 (Harding 1951). The British continued work in the 1970s (Northedge 1992) and the Spanish in the 1970s and again in the 1990s (Almagro 1983; Olavarri-Goicoechea 1985). The Umayyad palace and audience hall are among the most thoroughly investigated and published Early Islamic sites. The Amman citadel was the first site in Jordan to have substantial, published, later Abbasid and Fatimid period remains.

Between 1950 and 1953, the Canadians F. V. Winnett and W. L. Reed (1957-58), and A. D. Tushingham (1972) excavated Dhiban, a major multi-period site with a late-phase component. Their phasing of the Islamic periods could benefit from reanalysis.

The first season at Pella in 1967 by Robert Smith (1973) was important for distinguishing Byzantine and Umayyad pottery. The Heshbon excavations in the 1970s led to James Sauer's development of a basic pottery chronology for Jordan (Sauer 1973).

The Jerash international project in the early 1980s proved seminal for Jordan. The extensively published excavations (Zayadine 1986; articles in *Syria* vol. 66 [1989]) revealed occupation up to the tenth century. Of particular interest is a housing unit in the south Decamanus continuing into the ninth century, when potters installed kilns (Gawlikowski 1986). Excavators also discovered eighth-century pottery kilns in the north theater (Schaefer and Falkner 1986).

The resumed excavations in Pella in the 1980s were also of fundamental importance (McNicoll, Smith and Hennessey 1982; Smith and Day 1989; McNicoll et al., 1992; Walmsley 1988; 1991; 1992a; 1992b). The exceptionally well-

published excavations revealed extensive occupation on the main tell continuing up to the 749 earthquake, while later occupation up to the tenth century moved to a new area slightly to the north.

Abila is another of the Roman-Byzantine cities in northern Jordan, where excavations since 1980 have revealed continued major occupation into the early Islamic period (see most recently Mare 1994; nearly annual preliminary reports in the *Near Eastern Archaeology Society Bulletin*; Fuller 1987).

Since the late 1970s, the Franciscans have renewed work at Mount Nebo (Piccirillo, forthcoming). The recently excavated ancillary monasteries at ᶜUyun Musa (Piccirillo 1990; Alliata 1990) and ᶜAyn al-Kanisa (Piccirillo 1995) also demonstrated continued monastic occupation into the early Abbasid period.

It is regrettable that no substantive publication came out of Killick's excavations at Udhruh in the 1980s (Killick 1983).

In the early 1980s, King surveyed many of the Byzantine and Early Islamic sites, especially the desert castles, with an eye towards understanding their relation to trade routes (King 1982, 1987, 1992; King et al. 1983, 1987). The methodological reliability of collecting surface sherds to determine the occupational history of any given site is questionable. A case in point is Qaṣr Bshir, a well-preserved Late Roman castellum east of Karak, in central Jordan. The surveyors collected no pottery later than Late Roman from the surface, but excavation revealed an Umayyad phase of occupation. It seems that the Umayyad period occupants cleaned out the Late Roman occupational deposits from the interior of the fort and dumped the refuse outside the fort, where the surveyors found it. The evidence for the Umayyad occupation inside the fort was buried by the later rock tumble collapse of the fort walls and was not accessible on the surface (Parker 1986:53-55; Clark 1987).

Excavation does not necessarily provide the answers. Urice's carefully documented excavation at the Umayyad palace at Kharana failed to find any pottery in the foundation trenches which could date the construction of the building. Excavators dated it to the end of the seventh century based on historical reasoning and architectural analysis (Urice 1987).

Aqaba, early Islamic Ayla, has been under excavation since 1986, revealing a new city founded in the mid-seventh century a short distance away from the Byzantine settlement (Whitcomb various; Melkawi, Amr and Whitcomb 1994). Ayla flourished as a port on the Red Sea, but dwindled in the course of the eleventh century, until its inhabitants abandoned it at the start of the Crusades.

The excavations at Umm al-Rasas since 1986 have demonstrated the continued thriving presence of this Christian settlement into the ninth century (Piccirillo and Alliata 1994; Bujard, Piccirillo and Poiatti-Haldiman 1992). The Church of Saint Stephen, with its spectacular eighth-century mosaics, is only the largest of the numerous churches there used in the early Islamic period.

Humayma has been under excavation since 1989 (Oleson et al. 1993, 1995). Curiously, the members of the Abbasid family chose to live in this small out-of-the-way settlement in southern Jordan, during the first half of the eighth century, while they organized their ultimately successful overthrow of the Umayyad dynasty. They lived in a palatial residence with a small mosque nearby. Elsewhere at Humayma, excavators found housing from the Umayyad and Abbasid periods, in two cases built over earlier churches.

It is scarcely feasible to list here all of the other sites with excavated early Islamic remains. Each issue of the *Annual of the Department of Antiquities of Jordan* has several articles covering excavations of early Islamic sites. The Jordan Antiquities Database and Information System (JADIS) database lists some 750 early Islamic sites (Palumbo 1994).

Israel. In Israel, the archaeological study of the early Islamic period was comparatively neglected in the first years after 1948. One exception was Beth Yeraḥ, where a University of Chicago team excavated a domestic house built over a Byzantine church in 1952-1953 (Delougaz and Haines 1960). The excavations at Ramla in 1949 by Kaplan and 1965 by Rosen-Ayalon and Eitan remain essentially unpublished (Rosen-Ayalon and Eitan 1969; Rosen-Ayalon 1976).

It is particularly regrettable that the results of the excavations over the years by numerous teams in Tiberias, notably by Oren in 1969 and by Foerster in 1972-74, are only known from tantalizingly brief accounts (Oren 1971a, 1971b; Foerster 1993b; Hirschfeld 1992). Information about the industrial workshops for glazed pottery and glass in the south area of the city would be of particular interest.

The potpourri of excavation teams working at Caesarea since 1971 have also uncovered major remains for the Early Islamic period. These excavations revealed that the city was reduced in size from the Byzantine period, but continued to thrive. However, the publication of the early Islamic remains, such as the industrial zone from the Abbasid period in Field B, and Fatimid housing over the silted-up inner harbor, has not fared as well as the publication of the Roman and Byzantine remains (see the preliminary reports of Bull 1987; Raban, Holum, and Blakely 1993; also Lenzen 1983). Only brief information is available about the most recent seasons (see Holum et al. 1988:201-15; Ziffer 1996; Toueg 1996; Arnon 1996).

The large-scale excavations at Beth-Shean, underway since 1986, have also revealed much about the thriving early Islamic city (Tsafrir and Foerster 1989-90; Foerster 1993a; Foerster and Tsafrir 1993; Bar-Nathan and Mazor 1993; Tsafrir and Foerster 1994). Of particular note is the ubiquitous evidence for the 749 earthquake.

The excavations at Arsuf, which started in 1982, are published in a single article about a market street built as a uniformly planned unit in the time of the Caliph Abd al-Malik at the end of the seventh century (Roll 1987).

Results of the ongoing excavations at Ashkelon also await publication, beyond Sharon's discussion of a Fatimid inscription dated to 1150, just a few years before the Crusaders captured the city (1994, 1995).

Since 1967, there have been numerous excavations in Jerusalem; the most significant are the excavations to the south and west of the Haram al-Sharif conducted by Mazar and Ben-Dov (Ben-Dov 1971; 1985). These excavations are of fundamental importance for understanding the early Islamic presence in Jerusalem, but regrettably the prospects for a definitive publication of the excavation results are dim.

Among minor sites, Tel Anafa in the Upper Galilee, excavated over ten seasons between 1968 and 1986 (Herbert 1994), is remarkable for the meticulous publication of the meager traces of a small farming community, perhaps from the ninth up through the twelfth century.

The number of published reports of the Archaeological Survey of Israel's ten-by-ten kilometer survey areas continues to grow, especially for the areas of the Negev Emergency Survey. Avni's (1996) more general discussion is worth singling out, and Finkelstein's (1991) analysis of survey results in Samaria is also particularly valuable.

Currently in Israel, archaeologists are excavating many sites with an early Islamic phase of occupation. This work is briefly reported in the Israel Antiquities Authority's journal *Ḥadashot Arkheologiyot* (since 1984 translated into English as *Excavations and Surveys in Israel*).

Unexplored Sites

Even though the Early Islamic period has seen increased attention, many sites remain virtually unknown. A number of the major cities listed by the Arabic geographers lay uninvestigated. Some, such as Gaza, Jaffa, and Nablus, have remained inhabited throughout the centuries, inhibiting archaeological investigation, but other sites are now abandoned and would seem to be prime sites for excavation. For example, Aharoni only briefly investigated Qadas (Kedesh) in the upper Galilee and reported a three-meter-thick deposit from the Arab period there (1993). Sussita (Hippos) also warrants renewed attention (Tzaferis 1990). Epstein's statement that "the city was probably abandoned after the Arab conquest at the beginning of the seventh century" (1993:634) reflects the disinterest that the excavators in the 1950s had in the Islamic period remains, not the reality of their absence. Al-Jabiya in the Golan Heights awaits peace between Israel and Syria.

Al-Rabba, the leading city in the Karak plateau, was eclipsed by Karak only during the Crusades. The nature of the early Islamic period occupation there remains unstudied. The Department of Antiquities of Jordan cleared the site in the 1970s, but did not publish the results.

Surprisingly little is known about al-Ramla, beyond the mosque dating back to the city's foundation by the Umayyad caliph Sulayman and a unique mosaic floor depicting a mihrab (prayer niche) and Quranic inscription (Rosen-Ayalon and Eitan 1969; Rosen-Ayalon 1976). Given that it was the capital of the province of Filistin, much more likely waits to be uncovered.

Archaeologists have not clearly identified the winter palace of the Umayyad caliphs at Sinnabra, on the southwest edge of the Sea of Galilee (Mayer 1952).

Hippos (Sussita). The hilltop site of Sussita certainly warrants renewed excavations. Due to their disinterest, earlier excavators probably paid no attention to the signs of occupation after the Muslim conquest. *Photograph courtesy R. Cleave.*

The status of Petra, the capital of the Byzantine province of Third Palestine in the early Islamic period, remains obscure. Petra is not mentioned in the accounts of the Islamic conquest. Given all the references to Wadi Musa-Petra at the start of the Crusader period (Schick forthcoming), it is remarkable that excavators have found no trace of Early Islamic occupation. The only exceptions are some unpublished Arabic inscriptions briefly said by Dalman to date as early as 805 (1912:57). Just to the west of Petra, the monastery and/or pilgrims hostel at the peak of Mount Aaron, again mentioned in Crusader records, is an exceptionally good prospect for finding traces of Early Islamic occupation (Peterman and Schick forthcoming).

Jerusalem

Jerusalem was the third holiest city for Muslims, after Mecca and Medina.[1] Jerusalem witnessed major construction under the Umayyads. The largest public building project anywhere in the Umayyad caliphate included the rebuilding of the walls of the city and the Haram al-Sharif (Magness 1991), the construction of a platform in the center of the Haram, where the Dome of the Rock was then built, the construction of the al-Aqsa Mosque, the Golden Gate, the Dome of the Chain, the complex of palaces to the south of the Haram, as well as the repair of the roads near Jerusalem by Abd al-Malik (Sharon 1966). The investment that the early Umayyads put into Jerusalem stood in stark contrast to the absence of recorded construction in Lod, and suggests, even though no historical source explicitly records it, that Jerusalem, not Lod, was the Umayyad provincial capital up to the time that Sulayman founded al-Ramla around 705-15.

Islamic tradition associates Jerusalem with the Prophet Muhammad's night journey from Mecca to the Farthest Mosque (*masjid al-aqsa* in Quran 17:1) and with his ascension

to Heaven. The Christian pilgrim Arculf notes a crude mosque structure on the Haram al-Sharif (Temple Mount) around 675, but that was soon replaced by the al-Aqsa mosque (Wilkinson 1977:95).

The Dome of the Rock is the oldest surviving Islamic monument and is a unique commemorative structure that continues to generate an endless stream of studies. The collection of articles edited by Raby and Johns is one noteworthy recent publication (1992). The dedication inscription inside the Dome of the Rock records the date of 691-92, which may indicate the start rather than the end of construction by ʿAbd al-Malik (Blair 1992). This is a significant distinction given the timing of the events of the civil war with the rival caliph ʿAbd Allah ibn al-Zubayr. Other inscriptions record periodic renovations, but much of the original interior decorations has survived, as has the overall design of the building.

The debate over its function turns on how scholars evaluate the Arabic historical accounts that report ʿAbd al-Malik's intention to divert the annual Muslim pilgrimage to Jerusalem from Mecca, which was under the control of the rival caliph Ibn al-Zubayr. Goitein rejected that version (1950), but Elad has recently reopened the case for its plausibility (1992). Grabar, by stressing the anti-Christian polemics in the Quranic verses selected to decorate the interior, emphasized the message that the Dome of the Rock projects victorious Islam (1959). Rosen-Ayalon has recently pointed to the theme of Paradise that permeates the symbolism of the Dome's decorations (1989).

By contrast, the function of the al-Aqsa mosque has always been clear—it was the congregational mosque for the Muslims in Jerusalem—but its layout has undergone extensive changes during periodic renovations, the phasing of which continues to be debated (Hamilton 1949, Creswell 1932-40; Hamilton in Creswell and Allan 1989:79-82; Hamilton 1992).

Excavations by Mazar and Ben-Dov (Ben-Dov 1971; 1985), and recently by Reich, revealed a row of large palatial buildings from the Umayyad period immediately south of the Haram. One multi-storied palace connected by an upper story bridge to the al-Aqsa Mosque may have been the Dar al-Imara (administrative center and residence of the ruler). These palaces seem to be what are referred to in a few papyrus documents found in Aphrodito in Egypt. The documents deal with workmen constructing the al-Aqsa Mosque and caliphal palaces in Jerusalem between 706 and 715-16 (Küchler 1991). The 749 earthquake destroyed the palaces. Although they saw subsequent occupation, it was not significant enough to warrant the attention of the Abbasid and Fatimid geographers, such as al-Maqdisi, who described Jerusalem.

The Double Gate in the south Haram wall continued to serve as the main entrance into the Haram, but in the Fatimid period workers blocked the underground entrances to the Haram from the south; they were no longer needed after the abandonment of the Umayyad palaces. Entrance to the Haram then was through the gates, principally the Bab al-Silsila, in the west and north sides.

The Dome of the Chain, immediately to the east of the Dome of the Rock at the exact center of the Haram, dates to the Umayyad period, but its function remains uncertain. An open structure consisting of a dome set on a circle of pillars, it could hardly ever have served as a treasury building, for which a closed structure would have been needed (Rosen-Ayalon 1989:25-29).

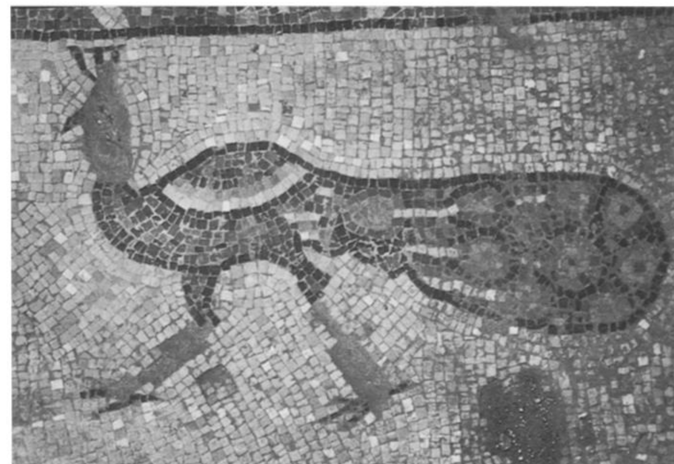
The Golden Gate, in the east wall of the Haram, has also generated its share of debate, but an Umayyad date seems fairly certain. The gate would have been closed by the time that an establishment for Sufi mystics (Arabic *zawiya*) was constructed on top of the gate around the middle of the eleventh century (Sauvaire 1876:64, 66, 128, 140). Other secondary shrines soon proliferated on the Haram, and the construction of porticoes on the north and west sides in the tenth century made the Haram a clearly delineated sanctuary.

In the Early Islamic period, settlement extended outside of the city walls, showing strong continuity from the Byzantine period. Recently, excavations uncovered a complex of Armenian monasteries north of the Old City that demonstrate intensive settlement of the area from the mid-fifth century up to the ninth century (Tzaferis et al. 1994; Amit and Wolff 1994). To the west of the Old City stood a market and industrial area, but it is not clear for how long that area remained in use (Maeir 1994). In the Umayyad period, the extended south city wall built by Eudocia in the fifth century, continued to enclose Mount Zion. It is not so clear when the line of the south wall shifted back to the north to where it is today: Wightman argues that it took place as early as the end of the Umayyad period, and certainly not as late as the general rebuilding of the city walls after the 1033 earthquake (1993:235-36).

Within the walls of the Old City north and west of the Haram very little survives from the Early Islamic period, beyond occasional inscriptions, because of subsequent building. For the physical setting of Jerusalem, written information such as the "Merits" or "Virtues of Jerusalem" literature comes to the fore (Elad 1995; Hasson 1996; Bloom 1996). In the "Merits" literature, the Muslim authors collected the traditional sayings of the Prophet Muhammad or other early Muslim figures about the religious significance of Jerusalem. While the Crusades spurred great Muslim interest in the Merits of Jerusalem literature, the two earliest collections of traditions about Islamic Jerusalem date to the century before the Crusades: those by al-Wasiti, a preacher in the al-Aqsa mosque, who wrote not later than 1019-20 and by Ibn al-Murajja, who lived in Jerusalem in the mid-eleventh century. But the written sources must be studied closely. The Crusades caused a fundamental break between the Early Islamic and Late Islamic periods in terms of the physical layout of the city. One cannot automatically extrapolate from the writings of the Mamluk period authors, such as Mujir al-Din, back to the pre-Crusader period (Sauvaire 1876). Islamic traditions and names for buildings have shifted locations.

▽ **General view** of the mosaic floor in the church at ʿAyn al-Kanisa, an ancillary monastery near Mount Nebo in Jordan. The mosaic floor was dedicated in 762, and shows images that suffered deliberate damage by scrambling their cubes. *Photograph courtesy of Michele Piccirillo.*

▷ **Detail of the mosaic floor** in the church of Saint Varus in Khilda, showing the deliberate removal of the mosaic cubes from the head, upper body, and arms of the figure personifying the Earth. Plaster was used to patch the areas where those removed cubes had been. *Photograph courtesy of M. Najjar.*



▷ **Another scene from the mosaic floor,** showing the deliberate, careful removal of the mosaic cubes in the legs and head of a peacock. *Photograph courtesy of Muhammad Najjar.*

Christians and Muslims in the Early Islamic Period

Church Building

A notable development of archaeological research in the last few years is the identification of a substantial amount of church construction dated after the Muslim conquest. This attests to thriving Christian communities well into the Abbasid period (Schick 1995).

For example, not long before 700, Nestorian Christians established a monastery at Tel Masos in the Negev. This monastery is a rare attestation of Nestorian Christians in Palestine (Fritz and Kempinski 1983). In the Umayyad period, Christians apparently constructed the Area I basilica at Umm Qais, in northern Jordan (Wagner-Lux et al. 1993).

Alongside these and other cases of new construction in the seventh and eighth centuries, there were many cases of substantial rebuilding of earlier buildings. These can often be dated precisely from the dedication inscriptions in their mosaic floors.

The dedicatory inscription of the second-phase mosaic pavement of the recently excavated church of Saint Varus at Rujm Uthman/Khilda, in the northwest area of Amman, dates the structure to 687. The church collapsed and was abandoned in the mid-eighth century (Najjar and Saʿid 1994).

The early Christians identified as the cave where Lot and his daughters stayed after the destruction of Sodom with the monastery and pilgrimage site of St. Lot at Deir Ain Abata at the southeast end of the Dead Sea. St. Lot was repaved with mosaics in 691and occupation continued well into the Abbasid period (Politis 1993; 1995).

Justinian built the anchor church at Mt. Berenice overlooking Tiberias. The 749 earthquake destroyed the church, but in the second half of the ninth century Christians rebuilt it on its Byzantine foundations. It continued in use until the Crusader period when artisans installed a new mosaic with a pattern of black and white circles in the church courtyard (Hirschfeld 1994).

Khirbet al-Nitla, a monastery just east of Jericho, reveals evidence of several occasions of rebuilding during the Early Islamic period up to the ninth century (Kelso and Baramki 1941-51).

The mosaic in the lower church of el-Quweisma, in the southeast area of Amman, dates to 717-18 (Piccirillo 1994:266-67; 1984; Schick and Suleiman 1991), while the mosaic in the acropolis church at Maʿin, southwest of Madaba, dates to 719-20 (Piccirillo 1994:196-201; 1989:228-34; 1985)

The Church of Saint Stephen at Umm al-Rasas boasts mosaics dated to 718 (rather than 785—Schick 1995:472-73)

◁ **The mosaic floor** from the Church of Maʿin was dedicated in 719–20. The image of a tree replaced a bull, but humorously, with the tail and hind legs left clearly visible. *Author's photo.*

▷ **The mosaic floor** in the church of Saint Varus in Khilda boasts two undamaged birds, close to the damaged images seen in the two previous photographs. One puzzling aspect of the whole issue is why, in a number of churches, only some images, but not others, were damaged. *Photograph courtesy of M. Najjar.*

▷ **A pottery sherd** from Khirbet al-Karak, south of Tiberias, inscribed in Arabic with the words "In the Name of God" and a six-pointed and eight-pointed star, clearly incised by a Muslim. *Photograph from Delougaz and Haines 1960: plate 41:9.*

and 756 (Piccirillo and Alliata 1994), dating to the major rebuilding of the church.

Ramot, a monastic farm on the outskirts of Jerusalem, possesses a mosaic dated to 761. It uses the era of the creation of the world as chronological starting point (Arav, Di Segni, and Kloner 1990). Ayn al-Kanisah, near Mount Nebo, has a dedication date in its mosaic floor of 762 (Piccirillo 1994). The inscription uses an era of creation. The second phase mosaic pavement in the church of the Virgin in Madaba can now be read as 767, again using an era of the creation of the world (Di Segni 1992).

Dozens of the Christian tombstones that Reginetta Canova (1954) collected from a variety of sites on the Karak Plateau date to the seventh and eighth centuries. Such tombstones provide the main evidence so far for the early Islamic period occupation at a number of otherwise uninvestigated sites, such as Muhei.

The Destruction of Images

The continuing discoveries of churches with mosaic floors dating to the early years of the Abbasid period have reopened the question of the deliberate damage done to the images of people and animals depicted in those mosaic floors (see Schick 1989, 1995). Scholars often attributed the damage to an iconoclastic edict of the Umayyad caliph Yazid II in 721, attested in tendentious Christian literary sources, but the damage must have taken place after 762 at Ain el-Keniseh. It appears reasonable to conclude that the damage took place everywhere simultaneously and thus that all those churches whose mosaics suffered this damage were in use into the early Abbasid period. Although it is more tenuous, it also seems possible to claim that those churches with mosaic floors containing images that did not suffer such deliberate damage were no longer in use and their mosaic floors no longer visible.

The damage was often done carefully and repaired carefully as well, as for example at Rujm Uthman (Najjar and Saʿid 1994), most spectacularly at Umm al-Rasas (Piccirillo and Alliata 1994; *BA* 51:4 1989), and most humorously at Maʿin (Piccirillo 1994:200-202). The Christians themselves clearly did the careful damage and repair, but this leaves open the motivation for the damage. Did the Christians do the damage because of internal Christian disputes about images, or did the Muslim authorities have something to do with it? The desire to deface images of ordinary people and animals does not correspond to the opposition to the veneration of icons of Christ, the Virgin Mary, and saints manifested during the Iconoclastic outbreaks in the Byzantine Empire. The opposition to ordinary images is, however, reminiscent of the Muslim view of images, which does not permit the artistic depiction of any being possessing the breath of life. That leads to the further question: why would Christians in Palestine adopt a Muslim view of images? Perhaps there was a hardening of the Muslim attitude towards the Christians under the Abbasids, or both Christian and Muslim Arabs shared a general turning away from the use of images .

That final question of motivation—not merely the question of what people did, but why they did it—seems to lie outside the purview of archaeology. Regrettably, the written sources at our disposal do not provide a fully convincing answer. If the damage occurred during the early Abbasid period, then the accounts of Yazid II's edict clearly can not have had anything to do with it.

If the damage did indeed occur during the early Abbasid period, then a number of sites, known archaeologically only from their churches, such as Maᶜin, clearly saw substantial occupation during the early Abbasid period.

Early Mosques

It is difficult to distinguish between the Muslim and Christian populations from the remains of everyday material culture. Clear-cut cases like the inscribed sherd from Khirbet al-Karak are unusual (Delougaz and Haines 1960: pl. 41:9). Mosques only became clearly identifiable as such after the Umayyad caliph al-Walid introduced a prayer niche (mihrab) with a concave design during his reconstruction of the mosque in Medina in 707-709. The desert palaces include number of small Umayyad mosques, such as the ones recently excavated at Umm al-Walid and Humayma (Haldimann 1992:307-318; Oleson et al. 1995:347-48). They were typically just outside the main palatial residences. A number of open-air mosques were found recently in the Negev (Avni 1994).

It seems that the Umayyads rarely, if ever, converted churches into mosques. The Numerianos church at Umm al-Jimal is the only strong possibility of such a conversion (Schick 1995:143, 470-71). The conversion of the churches at Samah and Umm al-Surab, both in northern Jordan, more likely took place in the Ayyubid-Mamluk period than in the early Islamic period (King 1983).

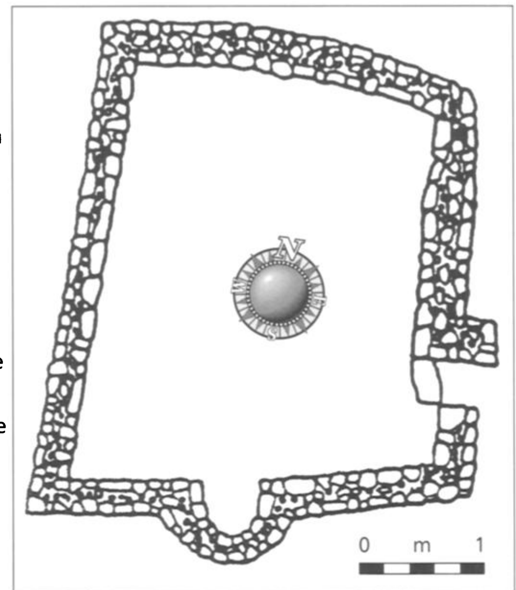
The Nature of Early Islamic Settlement

The settlement patterns in early Islamic Palestine have received focused attention in recent years. Articles by MacAdam (1994); Zeyadeh (1994), and Schick (1994, forthcoming) provide regional summaries. In the wake of the Islamic conquests, new Muslim immigrants from the Arabian peninsula settled in Palestine. They typically founded their new urban settlements adjacent to older settlements as at Ayla (Aqaba; Whitcomb, various), a few hundred meters from the Byzantine settlement, and Ramla, near the older city of Lod. Termed *amsar* (plural of *misr*), such settlements next to earlier ones were built on an orthogonal plan, as at Ayla where axial streets led from the four gates in the city walls. The administrative, religious, and economic functions of Islamic cities manifested themselves in architectural form in an administrative center (*Dâr al-Imâra*), a congregational mosque, and markets.

Because fortified coastal port cities were subject to Byzantine raids, the early Muslims settled garrisons of troops there. The term *ribat* used in the historical texts seems to refer to the fortified coastal cities themselves, rather than to separate watch towers, which are unidentified archaeologically (Elad 1982:155-57).

Members of the ruling family and Umayyad aristocracy acquired agricultural estates (*diyâ*ᵓ, plural of *dayᶜa*). ᶜAmr ibn al-ᶜAs, the army commander who conquered Egypt in the 640s, later lived in an estate in the Negev (Lecker 1989). But historical sources reveal more about such topics than do archaeological remains.

The "desert castles" (*qusur*, plural of *qasr*) in the eastern Jordanian steppe (e.g., Quṣayr ᶜAmra, Kharanah, Muwaqqar,



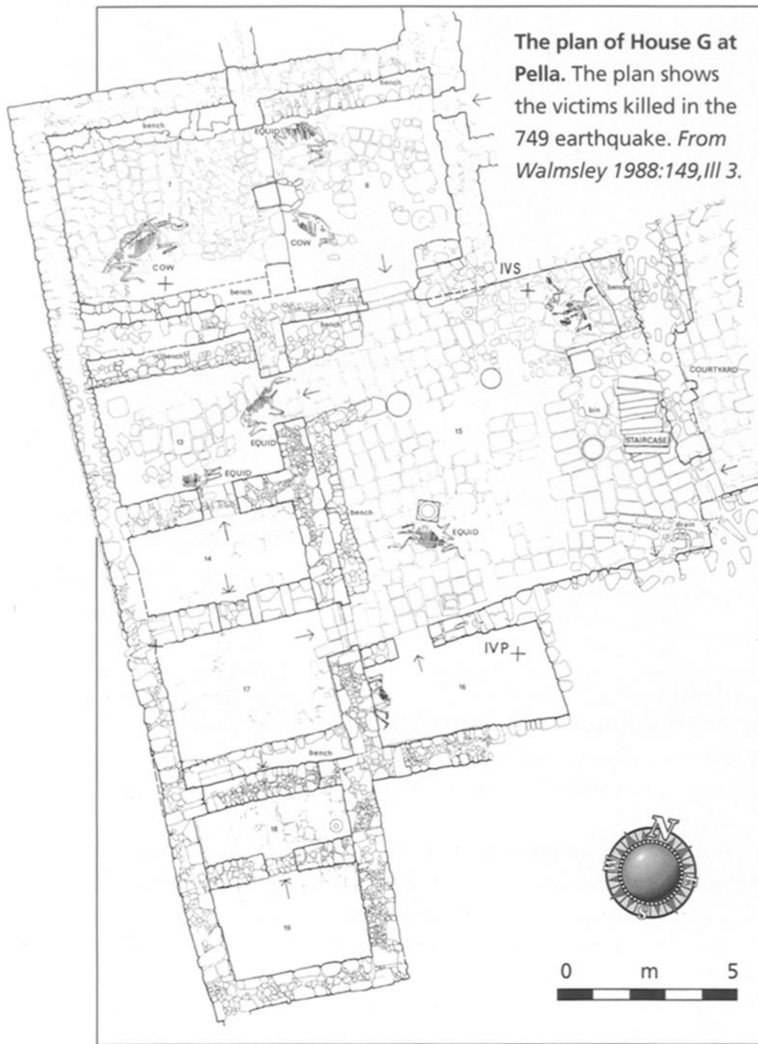
A typical simple mosque from Horvat Sharav in the Negev, with a rounded mihrab niche in the south wall pointing towards Mecca. Masons built the walls of the open-air mosque to a height of three to four courses of fieldstones. *Avni 1994:90.*

Mushatta, Qaṣr al-Tuba, and Hallabat: Creswell 1932-40), typically included lodgings, baths, and reception halls. They normally had enclosure walls and towers, yet had no military function. They sometimes show traces of agricultural exploitation in the vicinity, as at Hallabat (Bisheh 1982).

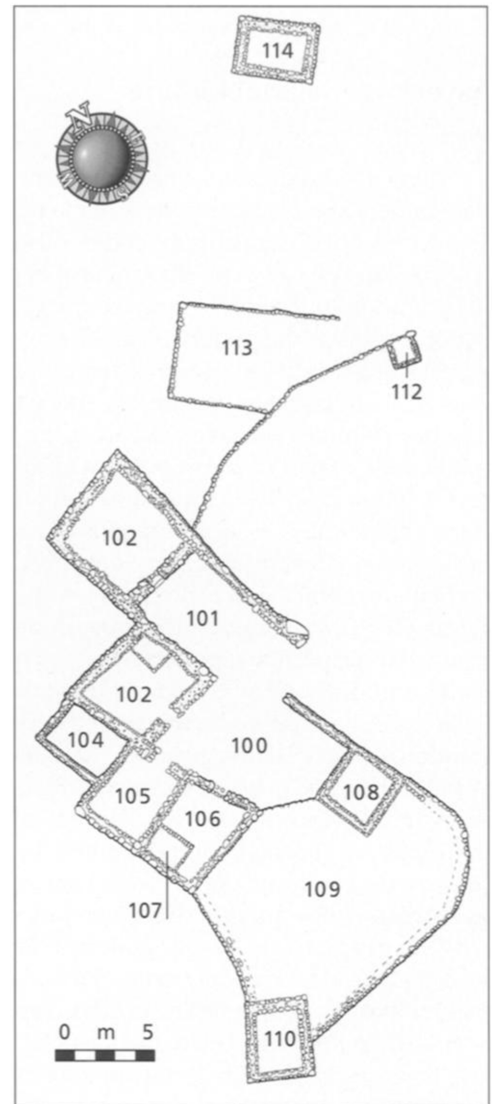
Scholars have discussed the reasons why the inhabitants built the Jordanian desert castles along the edge of the eastern steppe. The castles were not economically productive and required outside investment. King (1987) stressed their function as halting places along the travel routes. Both he and Gaube (1979) further argued that they enabled the Umayyad rulers to maintain close ties with the Bedouin tribes, their major political support.

Urban continuity extended from the Byzantine period into the early Islamic period. Kennedy (1985) notes the private use of formerly public spaces as one of the characteristics of the early Islamic period in Syria. But especially in northern and central Jordan, many urban centers, such as Jerash, Pella, and Amman, contracted into villages starting in the mid-ninth century. Walmsley argues that this contraction reflected the reduced administrative importance of the cities (1992a), but did not reflect a population decline, as opposed to concomitant rural growth. But this rural growth has not been demonstrated, and the urban contraction could have genuinely reflected reduced overall prosperity.

Recently, archaeologists have done much work in the Negev region in the early Islamic period. While the urban centers (e.g., Nessana, Shivta, and Rehovot) declined in the seventh-eighth centuries, that same period saw the spread of permanent agricultural sites in the Negev, including hundreds of farms and systematic terracing of wadis. Haiman (1995b) argues that in the Negev Highlands, south of the limit of Byzantine settlement, the Umayyad rulers established farms in order to settle the semi-nomadic Arab tribes residing in the area. The existence of those farms and temporary settlements depended on the survival of the towns in the Negev. On the other hand, Avni (1996) notes the marginal importance of the Negev for the Umayyads and sees the



The plan of House G at Pella. The plan shows the victims killed in the 749 earthquake. *From Walmsley 1988:149,Ill 3.*



▷ **An Umayyad farmstead** at Naḥal Mitnan in the Negev with three separate dwelling units of roofed rooms and open-air courtyards (102 and courtyard 101, 103-104-105-106 and courtyard 100, and 108-110 and courtyard 109) with beaten earth floors. This farm house is one of four farmsteads in the Naḥal Mitnan, seemingly forming a cooperative unit of related tribal families. *From Haiman 1995:3, plan 3.*

growth in sedentarization, ending in the late eighth and early ninth century as a response to the decline of the Negev towns.

Nevo's arguments that pagan stelae worshippers continued into the eighth century around Sde Boker are a misinterpretation of ordinary habitation sites and agricultural and water installations as cultic sites (Nevo 1985, 1991).

Housing

Excavators have determined the plans of a number of private houses from the early Islamic period. Typically they share the common feature of a central open courtyard surrounded by rooms, with only a single entrance from the outside (Almagro 1992:351-52). At Pella, Room G in Area IV shows a certain degree of provincial prosperity (McNicoll et al. 1992:138-39; Walmsley 1995). The ground floor of this two-story structure had stone walls with a stable and workshop rooms around a columned entrance hall. Mudbrick walls enclosed the living rooms on the upper floor. The rooms had plain white mosaic floors and simple painted plaster walls. Excavated human remains showed that the stableman and two other people, two cows, a horse, and a sheep/goat were victims of the 749 earthquake. Another excavated private house from the Umayyad period at Jerash (Gawlikowski 1986, 1992) took the shape of an irregular arrangement of rooms around a central open courtyard. In the Abbasid period, the space was divided into three houses The farmsteads in the Negev were humbler. One excavated example from Naḥal Mitnan had separate dwelling units of one to three rooms around a shared courtyard (Haiman 1995a:3).

The dwelling units in the more elaborate palaces adopted a standardized pattern. Around the central courtyard each unit, called a *bayt*, typically consisted of a main hall and two-to-four adjacent rooms, as at Kharana (Urice 1987).

Baths were often associated with the palatial residences and typically were a short distance away from them. The baths usually consisted of a large main hall and reception room, with smaller side rooms forming a linear progression, as at Quṣayr ʿAmra (Almagro et al. 1975:fig. 4). Because of a scarcity of water, the baths were not immersion baths. Instead water was poured over the bather. No public baths in the urban centers have survived.

Aspects of Material Culture

Pottery

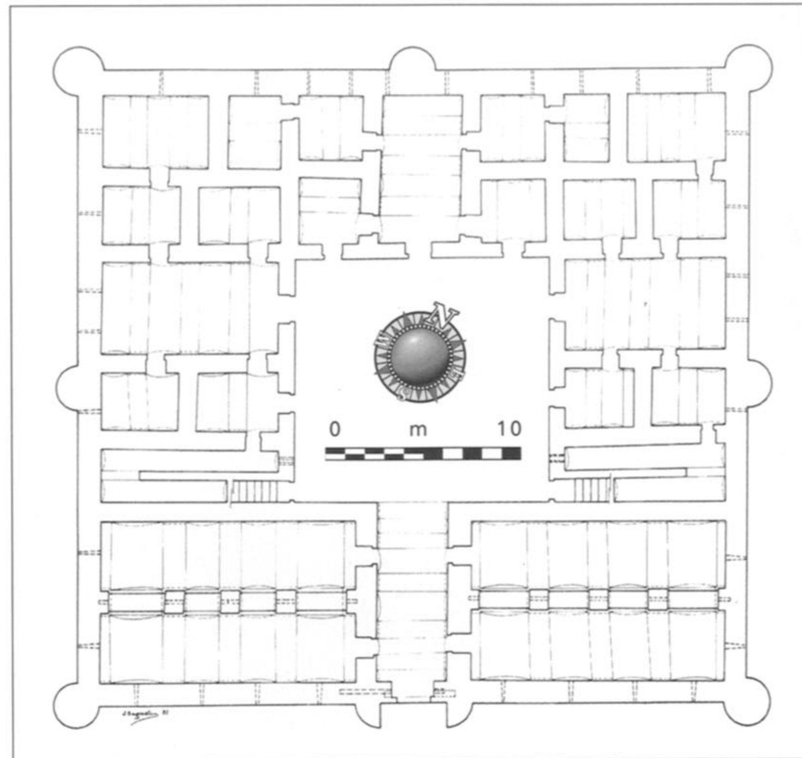
Within the last decade, archaeologists have greatly increased their understanding of the pottery of the Early Islamic period. The number of excavated sites and published reports of pottery has now reached a critical mass, enabling the periodization to be worked out with greater accuracy. There are a number of surveys of the pottery types.[2] Excavation reports with significant publications of early Islamic pottery are much too numerous to list here. Baramki's study (1942) of the pottery from Khirbet al-Mafjar served as the first fundamental publication of early Islamic pottery from Palestine, but his results must now be examined in conjunction with Whitcomb's reanalysis (1988a). The reports by Schneider on Mount Nebo (1950), de Vaux and Steve on Abu Gosh (1950), Saller on Bethany (1957), and Delougas and Haine on Khirbet el-Kerak (1960) were among the most important other early studies of early Islamic pottery.

The studies by Sauer on Heshbon (1973) and Smith on Pella (1973) have proved seminal for the more refined understanding of early Islamic pottery. The extensive excavations at Pella since 1979, at Jerash since 1981, Aqaba since 1986, and Umm al-Rasas and the Madaba-Mount Nebo area since the 1980s are especially important for Jordan.[3] Rashdan's study of the Umayyad pottery from Umm el-Summaq in central Jordan (1989) has been detrimentally overlooked.

The study of early Islamic pottery in Israel has been a bit slower to develop, and the results of the major ongoing excavations at Ashkelon, Beth-Shean, and Caesarea have not yet been fully published. The studies on Capernaum by Peleg and Berman (in Tzaferis 1989) are important, but are hampered by too early dating of the strata. The same holds true for Brosh's study of Caesarea (in Levine and Netzer 1986:66-89).

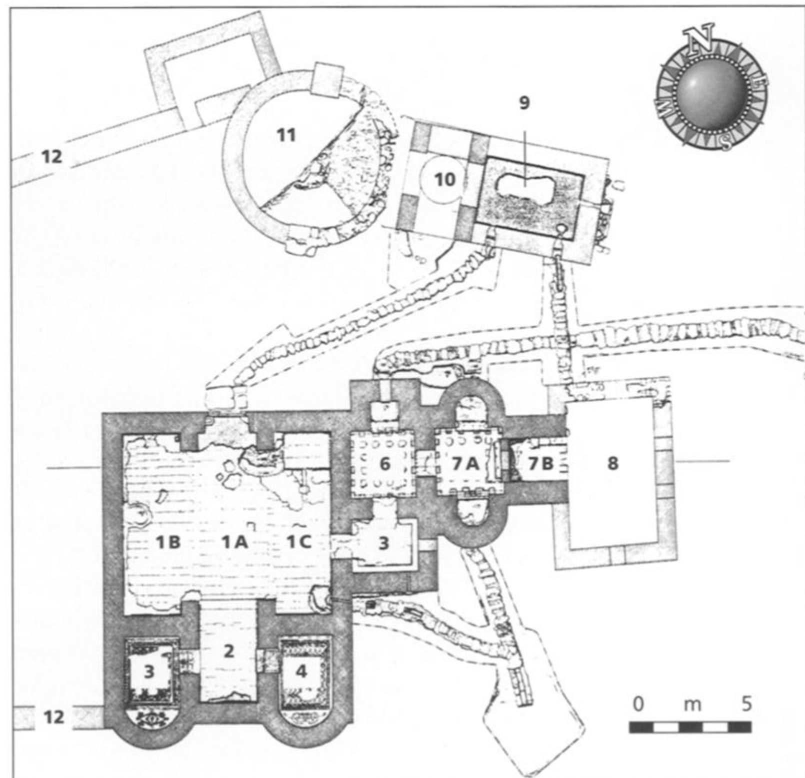
The study of pottery remains principally a study of morphological forms in order to date the pottery on stylistic grounds. While it has become standard for ceramicists to include descriptions of the wares, comprehensive classification of complete corpora from a given site by ware type is still exceptional.[4] Quantitative analysis of, for example, the relative frequencies of the various types of pottery, or the total numbers of pottery vessels, is rare (see Schaeffer and Falkner 1986). Analytical studies of provenance, such as identifying clay sources through such chemical analyses as Neutron Activation, are needed (see Meyers, Strange, and Meyers 1981:139-46; Meyers 1985).

There were regional differences in pottery styles throughout the period. For example, the distinctive eighth-century cream-slipped pottery decorated with red painted lines and swirls is ubiquitous in north and central Jordan, but completely absent in southern Jordan (i.e., at Humayma and Aqaba). As Watson observes in connection with the pottery from Pella, in the seventh century the distinct division between south and north reflects the east-west orientation of the regional networks (1992).



△ **The floor plan** of the ground floor at the Umayyad desert castle at Kharana showing a number of uniform dwelling units consisting of a central hall and adjoining rooms. *From Urice 1987:158, fig. 119.*

▽ **The floor plan** of the Umayyad bath at Quṣayr ʿAmra, showing the main audience hall (1-4) and the rooms of the bath on the side (5-7), arranged linearly, and the water supply facilities (9-11) just to the north of the main building. *From Almagro et al. 1975:fig. 4.*



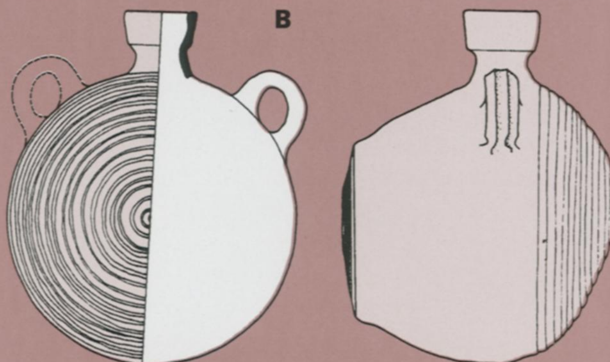
Umayyad Pottery from Pella

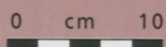
A. Jug—Pella.
Mid-eighth century, in 749 earthquake destruction.
Red, hard ware, white
painted wavy lines.
From McNicoll et al. 1982:pl. 142:1; Walmsley 1995:fig. 7.1.

B. Jar—Pella. Mid-eighth century, in 749 earthquake destruction.
Cream ware, red painted wavy lines.
From McNicoll et al. 1982:pl. 143.1; Walmsley 1995:fig. 6.2.

C. Water flask—Pella Mid-eighth century, in 749 earthquake destruction. Cream ware, shallow ribbing, with a characteristic shape that is often termed a "pilgrim flask." *From McNicoll et al. 1982:pl. 144.1.*

D. Bowl—Pella. Mid-eighth century, in 749 earthquake destruction. Hand-made, grey ware with incised wavy lines. *From McNicoll et al. 1982:pl. 145.6.*



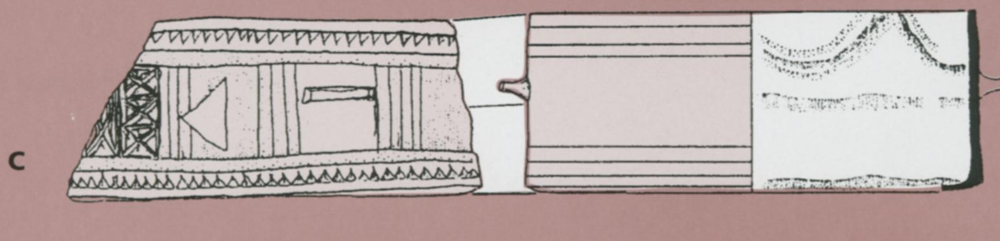


Abbasid pottery from Pella

A. Bowl—Pella. Late eighth-ninth century, rather than early eighth. Cream ware, red painted interlacing circles. For the type, called "palace" ware, see ʿAmr 1986a and for a color photograph of the type see Piccirillo and Alliata 1994:pl. 35. *From Walmsley 1991:146, n. 43, table 4, fig. 8.1; 1995:fig. 6.9.*

B. Jug—Pella. Mid to late ninth century. Thin cream ware, three-handled jug with a strainer in the neck and applied "turban" knobs on the handles. *From Walmsley 1991:table 3, fig. 72; 1995:fig. 9.5.*

C. Bowl Pella. Mid-late ninth century. Hand-made, straight sides, with ledge handle; red and white painted lines, incised interior, cut and painted exterior (for the type, called "Kerbschnitt" ware, see ʿAmr 1990). *From Walmsley 1991:145, table 3, fig. 6.3; 1995:fig 9.6.*



Pottery from Umm al-Rasas

A. Bag jar—Umm al-Rasas. Eighth–ninth century. Black ware, white painted lines. *From Piccirillo and Alliata 1994:283, no. 87; 331, pl. 34.1.*

B. Jug—Umm al-Rasas. Eighth-ninth century. Red ware, incised horizontal lines on neck. *From Piccirillo and Alliata 1994:283-84, no. 95; 331, pl. 34.1.*

C. Bowl—Umm al-Rasas. Eighth–ninth century. Red ware with black surface and ribbing. *From Piccirillo and Alliata 1994:283-84, no. 97; 331, pl. 34.1.*

D. Plate—Umm al-Rasas. Eighth–ninth century. Red ware, white slip, red painted lines on interior. *From Piccirillo and Alliata 1994: 283-84, no. 92; 331, pl. 34.1.*

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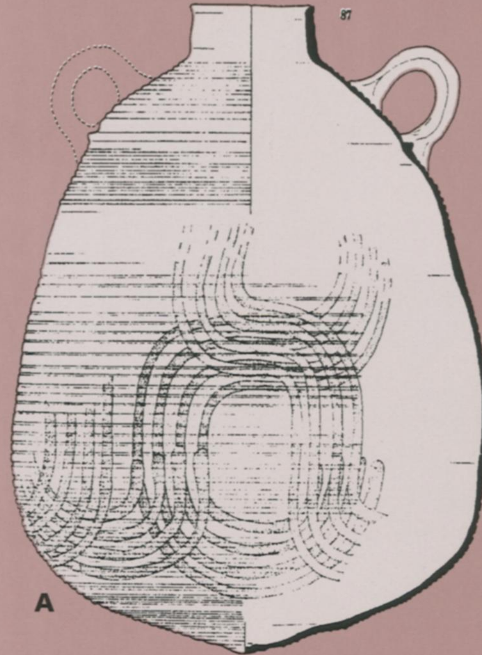

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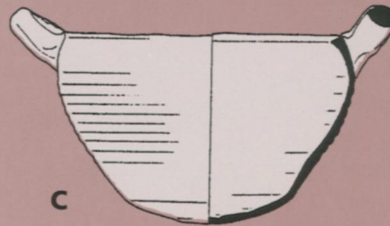
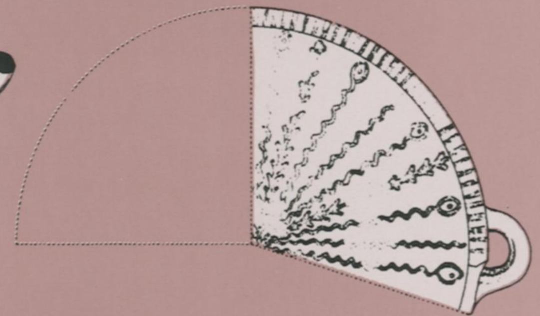


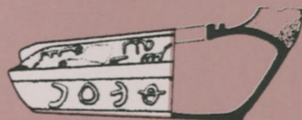


Lamps

A. Inscribed lamp—Jerash. 211 AH/826 CE A number of oil lamps with Arabic inscriptions are known from Jerash and elsewhere in Jordan (see ʿAmr 1986b). The present example bears the inscription: "In the name of God, this lamp was made by Bishr son of Samid in Jerash in the year 211". Gawlikowski (1995) reads the date as 111 AH/ 729-730 CE *From Khairy and ʿAmr 1986:150, no. 12, fig. 10, pl. 40.11.*

B. Lamp—Jerash. Mid seventh to mid eighth century. Such oblong lamps with handles ending in zoomorphic heads are called "Jerash lamps" because they are ubiquitous there. *From Scholl 1986:163, fig. 1.4; Group III, pl. XIV.A, p. 135.*

C. Lamp—Jerusalem. Eighth century. This type of almond, pear, or slipper-shaped lamp with a channel between the nozzle and filling hole and a cone or tongue handle is characteristic of the eighth century. Such lamps are normally decorated with wavy lines, vine scrolls with grape clusters, and sometimes birds. Ardnt has studied the type. *From Ardnt 1986:254, fig. 4.48.*



B

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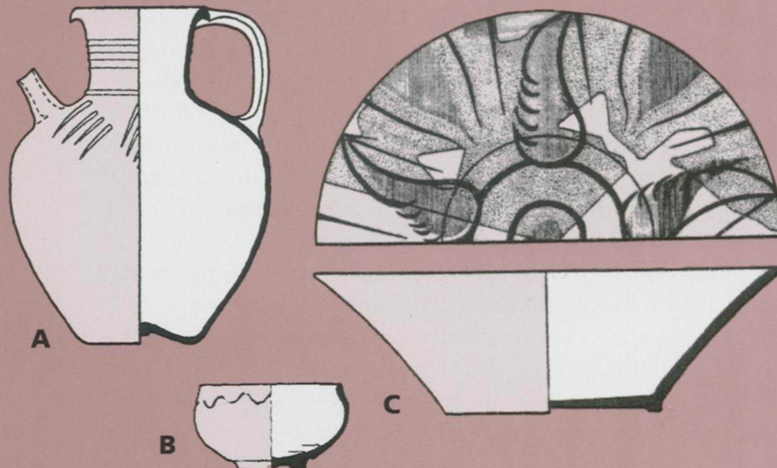
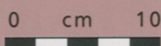
Pottery from the Jerusalem Area

A. Jug—Bethany. Mid-sixth to early eighth century. Hard metallic ware, nicks on shoulder. *From Saller 1957:304, fig 59.2705.*

B. Bowl —Jerusalem. Late sixth to seventh century. Hard metallic ware, wavy incised lines on neck. Gihon gave such hard metallic ware, often with burnished bands and wavy incised lines or nicks on the exterior, the name Fine Byzantine Ware (1974). Magness argues that the Jerusalem area was the center of manufacture, based on the clustering of sites where this type of ware has been found (1993:166-71; 193-201; 236-41). *From Magness 1992:fig. 12.3.*

C. Bowl—Abu Gosh. Tenth–eleventh century. Green and brown interior glaze. *From De Vaux and Steve 1950:pl. A1.*





Pottery from Aqaba

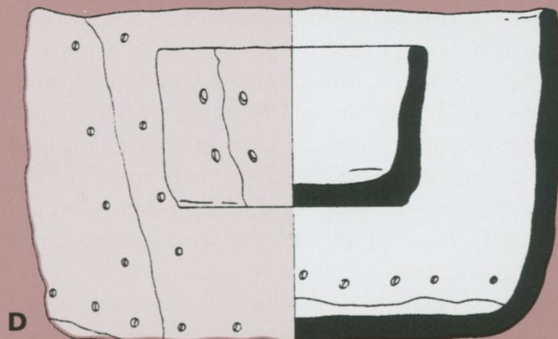
A. "Mahesh" jar—Aqaba. Second half of the eighth century. Whitcomb has used the black painted Aramaic execration text in Hebrew characters on the bottom of this jar to name this type: "As for Mâhish (troublemaker), this demon and any (demon) that is angry at me—overturn!" Characterized by a cream ware and comb incising this type of pottery precedes the earliest Islamic glazed ceramics. *From Whitcomb 1989b:269, n. 1; 278, fig. 5a.*

B. Amphor—Aqaba. Late seventh-early eighth. This type of amphorae with red-orange ware and a cream surface was manufactured in Aqaba for transport of goods by ship in the Red Sea region (Melkawi, Amr, and Whitcomb 1994) , where a number of examples have been found as far south as Yemen. Humayma is the only other site in Jordan where the type has been found. *From Whitcomb 1989a:169, n. 13, 183, fig. 5a.*

C. Bowl—Aqaba. Eighth century. Coptic glazed. Orange ware, cream surface, green glaze with brown streaks on interior and rim. *From Whitcomb 1989c:177, fig. 5.a.*

D. "Tupperware" bowl—Aqaba. Eleventh century. Hand-made bowls, cups, and small jars become common at Aqaba in the Fatimid period. Their simple, modular forms led Whitcomb to dub the type as the early Islamic version of "Tupperware". *From Whitcomb 1988b:214, fig. 5h.*

E. "Tupperware" jar—Aqaba. Eleventh century. This hand-made jar has geometric designs painted on it, and may represent the beginnings of the geometric-painted tradition that is characteristic of the following Ayyubid-Mamluk period. *From Whitcomb 1988b:214, fig. 5e.*



The pottery types evolved from one generation to the next without any sharp breaks caused by political events. Walmsley notes two periods of accelerated change—from the end of the seventh to the early eighth century and again during the first half of the ninth century (1992b:256).- The Umayyad and Abbasid administrations were at their peaks during these two periods. A new international style of ceramics became widespread in the ninth century. The use of pale cream ware typical of the Samarra style and glaze replaced earlier local types, and the Jerash kilns ceased production as a result of this change.

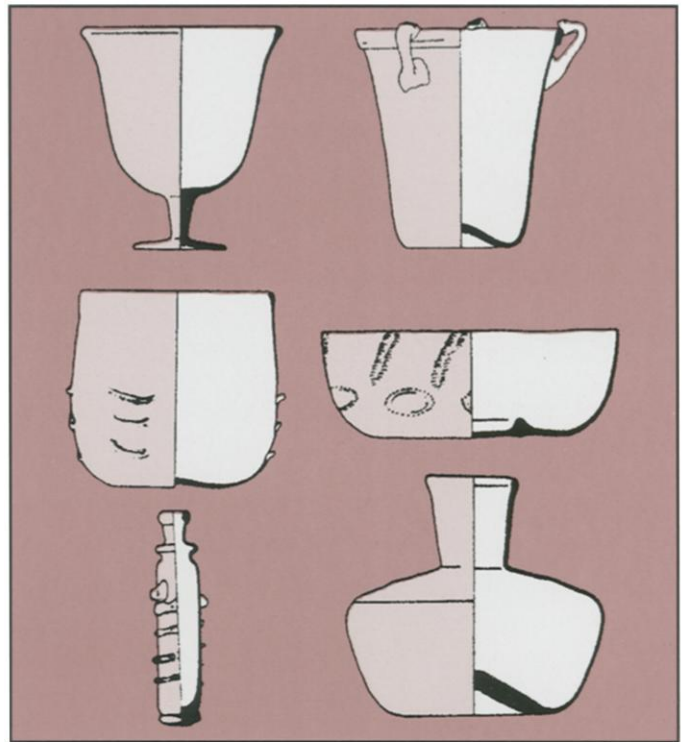
Glaze was used not only for decoration, but for its practical value. The application of glaze to exterior and/or interior surfaces makes the vessel impervious to water and easier to clean, hence the interior glaze on some cooking pots. Potters can produce a range of colors by the addition of metal oxides—copper, iron, antimony, cobalt, manganese—to the glaze. Two ceramic vessels dating to the eighth or ninth century from al-Ramla contained remnants of pigment: a cup contained minium, an orange sediment used to glaze ceramics, and a potsherd held a purplish-brown powder made from hematite, used for decorating ceramics (Sorek and Ayalon 1993:11*, 33, fig. 26).

The use of glaze permitted a variety of decorative techniques, such as painting under or over the glaze, incisions (sgraffiato) into the slip before glazing, and splashing the glaze on the vessel. Luster-painting, in which metallic pigments are painted over white tin-glaze, was the fanciest type of decoration.

The pottery of the Early Islamic period was wheel-made except for a few specific hand-made forms—large basins and storage jars, and "cut-ware" bowls—while lamps were mold-made, showing a differentiation in manufacturing technique based on vessel type. But towards the end of the period the use of handmade jugs, jars, bowls, and small basins alongside their wheel-made counterparts increased. This represented the start of the duplication of vessel forms in hand-made and wheel-made versions that characterized the later periods.

A group of forty-seven clay bullae used as seals probably for papyrus documents can be dated to the eighth century (Kalus 1987).

Archaeologists have excavated and published only a few kilns dating from the early Islamic period, e.g., Aqaba (Melkawi, Amr, and Whitcomb 1994) and Jerash (Schaefer and Falkner 1986), where potters manufactured much of the pottery found in northern Jordan at places such as Pella. Other brief mentions of kilns include the early eighth-century ones at Beth-Shean (Bar-Nathan and Mazor 1993:36-37), the ninth-century kilns in Jerash (Gawlikowski 1986:117), the tenth-century kiln in the south area of Tiberias, seemingly in an industrial area south of the city wall (Stern 1995), and the tenth-eleventh-century workshop for glazed pottery at Tiberias—Ganei-Hammat (Oren 1971). Franken and Kalsbeek have carefully studied the details about how potters made the various forms (1975).



Glass from Jerash and Pella

Goblet—Jerash. Sixth to eighth century. Light blue, stemmed goblet. *From Meyers 1987:211-12, fig. 11x.*

Lamp—Jerash. Sixth to eighth century. Light blue-green, tumbler lamp. *From Meyers 1987:212, fig. 12p.*

Beaker—Pella. Late eighth to early ninth century. Blue-greenish beaker with six columns of three nips. *From O'Hea 1993:227, fig. 25.2.*

Bowl—Pella. Late ninth to tenth century. Thick-walled, wide, amber bowl with pincered combed lines and circles. *From O'Hea 1993:227, fig. 25.11.*

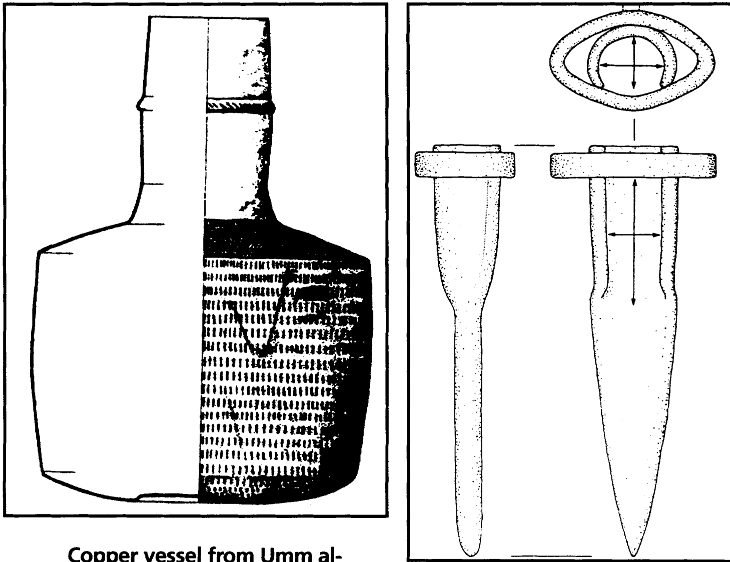
Flask—Pella. Late eighth to early ninth century. Narrow olive green flask wound with a ribbon trail and with an added amber coil base. *From O'Hea 1993:227, fig. 25.7.*

Flask—Pella. Late eighth to early ninth century. Light olive green, thick-walled flask. *From O'Hea 1993:227, fig. 25.10.*

Glass

Paralleling the study of pottery, the early excavations at Samarra (Lamm 1928) and Hama (Riis and Poulsen 1957) provided the basis for the study of Early Islamic glass. Hasson serves as a general introduction to glass throughout the Early Islamic world (1979).

Excavators commonly find glass vessels, but do not publish them as fully as pottery. The most extensive presentation of glass typologies from the early Islamic period is from Jerash (Dussart 1986:112-38; Meyer 1987, 1989). Meyer's particularly interesting study examines the relative quantities of the various types over time. This results in a "battleship curve" pattern demonstrating initial limited adoption of a new form, the main phase of wide-spread use of an established form, followed by limited lingering use of a form that had gone out of general use. Pella is the best site for Abbasid period glass (O'Hea 1993). Nessana is another site with an extensive publication of the glass (Colt 1962:76-91).



Copper vessel from Umm al-Walid in Jordan (left). Radiographic and metallurgical examination revealed how it was constructed of hammered sheets of almost pure copper, with slight traces of tin, lead, and arsenic, joined with a high-tin solder. *From Schweizer 1992:17:fig. 11.5.*
One of three iron torches from the Civic Complex in Pella. They were placed along a wall, attached to a board at about 0.50 m intervals. *From Smith and Day 1989:117-18, pl.61.14.*

Glass in the Early Islamic period shows technological and stylistic continuities with Byzantine glass. Most of the glass is light blue or blue-green in color, but amber and darker green became popular from the end of the eighth century. Most of the glass was free-blown.

Excavators recently found one artistic glass vessel: a cup from the eighth century painted in the luster technique. It is decorated with figures of animals and plants in a brown which contains silver and a bit of copper and iron, and a green containing copper. (Sorek and Ayalon 1993:10*, 25, fig. 17). Glass weights have been found at Aqaba (Whitcomb 1994a:19), Heshbon (Kritzeck 1976), and Ramat Barneʿa in the Negev, datable to 751-53 (Lester 1990).

Metal

Excavators have recovered a substantial number of metal objects, most notably the spectacular hoard found in Caesarea in 1995 (Ziffer 1996). Dating to the end of the tenth or the beginning of the eleventh century, the hoard of over two hundred pottery, glass, and copper-alloy objects included large candlesticks, buckets, ladles, jugs, amphoras, basins, bowls, trays, and braziers that were hidden by a wealthy private family during a time of precarious security in the cities along the Mediterranean coast. Other well preserved copper-alloy objects have emerged from Tiberias (Ziffer 1996). The Umayyad metal objects from Fedein-Mafraq await publication (Humbert 1989).

A few metal objects found in the Umayyad palace at Umm al-Walid in central Jordan have been studied metallographically (Schweizer 1992).

An unusual case of well-preserved iron are the torches from Pella, dating to the second quarter of the eighth century (Smith and Day 1989:117-18, pl. 36a and 61.14). Workers also found other tools at Pella.

Excavators uncovered jewelry in Tiberias, Caesarea (Holum et al. 1988:214-15), Ashkelon (Rosen-Ayalon 1991), and Jerusalem, in hoards seemingly hidden in Fatimid times (Brosh 1987). The 749 earthquake destroyed a goldsmith's workshop in Beth-Shean (Foerster 1993a:226).

Evidence for gold and copper mining comes from the southern Arabah (Gilat et al. 1993; Rothenburg 1990).

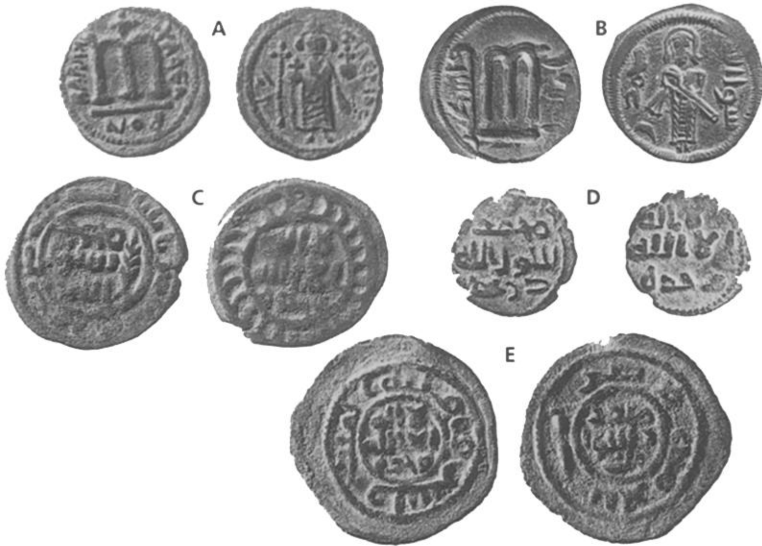
Coins

For the most part, scholars have worked out the basic chronology of the coinage of Palestine in the Early Islamic period. The three denominations of coins in circulation were the gold dinar, silver dirham, and copper fils. The fundamental study of coins in the Umayyad period is that by Walker (1956), who first systematically organized the information about the Umayyad mints and their coin issues. For the Fatimid period, the study by Miles is basic (1951). The volume by Bates demonstrates the value of careful study of numismatics for broader questions about governmental administration and history (1989). Much new work has been done on the copper issues recently, notably by Qedar (1980, 1988-89), but some topics, such as question of die links in different mints as a reflection of administrative geography, have not been fully exploited. The work by Ilisch is also fundamental for the coins minted in Palestine (1993).

During the Byzantine period, coins were minted in regional mints; Antioch was the only mint in Syria. In the aftermath of the Sasanian invasion of Syria in the 610s CE, all of the mints in the eastern part of the Byzantine empire were closed down, well before the Muslims arrived on the scene. Scholars debate how long the Umayyads took before they began to mint coins. Bates argues that they did not mint any coins until 692, and he links the beginning of gold and silver coins then with the start of copper coin minting as well (1989). Thus he posits a prolonged gap without any copper issues in Syria. But Qedar points out the market disruption that such a shortage of copper coins would have caused and argues that there was a continuous supply of semi-autonomous locally minted copper coins throughout the second half of the seventh century (1988-89).

There were three stages to the minting of copper coins in the numerous Palestinian mints during the Umayyad period, paralleling the gold and silver issues minted in Damascus. At first, the Umayyads minted coins of the "Arab-Byzantine" imperial figure type in the style of the contemporary Byzantine coins. The obverse typically depicted a standing figure, who holds a staff or orb marked with a cross, while the reverse had the standard Byzantine "M" denomination of forty nummia. The mint names could be written in Greek. The coins sometimes had countermarks in Arabic. Other coins of the imperial figure type were less close to the Byzantine prototypes and replaced the Christian elements with the Islamic statement of faith "There is no god but God, and Muhammad is the messenger of God." These could have mint names in Arabic.

The second phase were coins in which the imperial figure was replaced by the image of the standing caliph, typically



A: Copper fils of the imperial figure type of Arab-Byzantine coins minted in imitation of Byzantine coins of Heraclius or Constans II by the first Umayyad caliphs in the mid-seventh century up to the reform of ʿAbd al-Malik in 696–97. On the obverse is a single standing figure holding an orb with a cross and the mint name in Greek of Tiberias, the capital of the province (*jund*) of al-Urdunn. On the reverse is the letter M indicating the denomination of the coin as worth forty *nummia.* Undated. Qedar's series D. (1988–89:33, pl. 5:14)

B: Copper fils of the standing caliph type, showing the second stage of Islamic coins early in the reign of ʿAbd al-Mali. The caliph replaced the Byzantine emperor and the Arabic Islamic inscriptions replaced Greek ones. On the obverse is the standing caliph holding a sword and the Arabic inscription: "Muhammad is the messenger of God." On the reverse is the M denomination marker and the mint name in Arabic, Iliya Filistin. Undated, but minted around 74–77 AH (694–97 CE.) Qedar's series F. (1988–89:34, pl. 6:21; Ilisch 1993: no. 1)

C: Copper fils showing the third stage of Islamic coins following ʿAbd al-Malik's reform in 696–97. Arabic Islamic inscriptions replace the figural image. On the obverse is the Arabic inscription "There is no god but God alone" with an outer circle of striations. On the reverse in the center is the Arabic inscription "Muhammad is the messenger of God" and a tree, while around the edge is "In the name of God this fils was minted in Iliya (Jerusalem)." Undated, but minted around the beginning of the 90s AH (710s CE; Ilisch 1993:no. 16).

D: Copper fils of the post-reform type. On the obverse is the Arabic Islamic inscription "There is no god but God alone." On the reverse is "Muhammad is the messenger of God" and the mint name Dharʿât (Adhriʿât), one of the southern Syrian mints in the province of al-Urdunn. Undated, but minted in the early eighth century (Ilisch 1993:231).

E: Copper fils of the post-reform type. On the obverse in the center is the Arabic Islamic inscription "There is no god but God alone" and surrounding it "To God is the dominion. Perfect fils." On the reverse in the center is "Muhammad is the messenger of God" and surrounding it "Minted in al-Ramla," the new capital of the province (jund) of Filistin. Undated, but minted around the 90s AH (710s CE; Ilisch 1993:no. 61: fourth type).

bearded, wearing a long robe and headdress and holding a sword in his right hand. The inscriptions and mint names were in Arabic, not Greek. The reverse continued to have the "M" denomination mark. Such coins were minted only in the junds of Filistin and al-Urdunn, revealing a regional difference from the issues farther north in Syria, where the contemporary standing caliph coins depicted a cross on steps on the reverse.

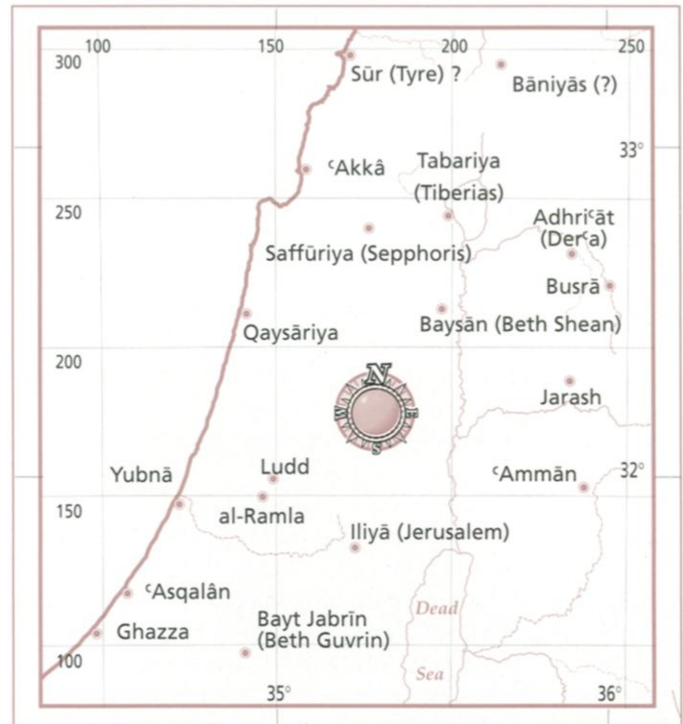
That second phase had not run very long before the Umayyad caliph ʿAbd al-Malik radically reformed the coinage in 697 by introducing coins in which the images were replaced by Arabic Islamic religious inscriptions. For such inscriptional coins, the obverse was arbitrarily defined as the side that bears the inscription "There is no god but God." The minting of these post-reform coins was widespread. They were undated and without mint names and placing them in correct chronological sequence has required careful examination of cases of overstriking. The two provinces of Filistin and al-Urdunn soon went their separate ways in their mint issues, reflecting broader administrative developments. In Filistin, coins had a characteristic outer circle of striations on the obverse, followed by coins with a central inscription, and an outer circle with inscriptions on both obverse and reverse. Meanwhile in al-Urdunn, minting was concentrated in Tiberias, and included coins that named the caliph al-Walid.

For the coins without mint names, the symbols used in the field can provide a clue to the mint. For example, coins with a lion were minted in Tiberias; the ones with a snake were from Adhriʿât; coins with a fleur-de-lis came from ʿAmman; and those with a candlestick were minted in Jerusalem (Barag 1988-89). Other coins had mint names, and in the province of Filistin, coins often recorded both the city name and the province name. Some coins that recorded only the name of the province of Filistin could be attributed to the mint of Jerusalem around the 710s. These raise questions about the administrative status of Jerusalem in the Umayyad period, at the time that the Caliph Sulayman ibn ʿAbd al-Malik founded al-Ramla as the capital of the province of Filistin around 715.

Umayyad-type copper coins may well have continued to be minted after 750, but dated issues are attested only starting in the early ninth century. Between 815 and 833, otherwise unknown local rulers in Palestine took advantage of the civil war between the successors of Harun al-Rashid to mint a number of short-lived issues of copper coins in their own names (Ilisch 1993:7). In the Abbasid period, for the most part, minting was restricted to al-Ramla, Gaza, Tiberias, and Tyre, the capitals of the junds of al-Urdunn and Filistin, and their principal Mediterranean ports.

Minting resumed in Palestine with the Tulunid takeover in 878, when the Tulunids minted gold and silver coins, but not copper ones, in al-Ramla and Tiberias, the provincial capitals. The Tulunids recognized the Abbasid caliphs, whose names appeared on their coins. The coins minted by the later

A: Abbasid silver dirham with lengthy Arabic Islamic inscriptions on the obverse and reverse. Also on the obverse are the mint name of Filistin (al-Ramla, the capital), the mint year of 263 AH (876–77 CE), and the name of the prince al-Mufawwid ila Allah, while on the reverse is the name of the Caliph al-Muʿtamid ʿalâ Allah. *Ilisch 1993:118.*
B: Ikhshidid gold dinar with lengthy Arabic Islamic inscriptions on the obverse and reverse. Also on the obverse are the mint name of Filistin (al-Ramla), the mint year of 332 AH (944 CE), and the name Abu Mansur the son of the commander of the faithful, while on the reverse are the names of the Abbasid caliph al-Muttaqî li-Allah and al-Ikhshîd. *Ilisch 1993:123.*
C: Fatimid "bull's eye" gold dinar with lengthy Arabic Islamic inscriptions on the obverse and reverse. On the reverse are the mint name of Filistin (al-Ramla), the mint year of 380 AH (990–91 CE) and the name of the Fatimid caliph al-ʿAziz bi Allah. *Ilisch 1993:159.*



Map showing the early Islamic mints in Palestine. *After Ilisch 1993:25.*

Ikhshidid rulers of Egypt also recognized the Abbasid caliph.

The diverse coins minted by the various contending powers in Palestine reflected the chaotic political situation in the late tenth and eleventh centuries. The Hamdanids from northern Syria, for example, minted coins in al-Ramla during their brief rule of the area in 942. The Qarmatians also minted coins in al-Ramla and Tiberias between 968-76, and gold dinars in the name of the rival caliph Abu al-Futuh al-Hasani al-Rashid li-Din Allah in 1012 were minted in al-Ramla as well.

Immediately after the Fatimids conquered Palestine, they began issuing their characteristic "bull's eye" coins with inscriptions in concentric circles on both sides at the mints of Filistin (al-Ramla) and Tiberias as well as Ashkelon, Akko, and Tyre. This minting stopped with the Seljuq invasion in the late eleventh century, although the Fatimids continued to mint coins in the ports that they controlled even after the arrival of the Crusaders, ending in Ashkelon in 1106, Akko in 1101, and Tyre in 1122.

Stone

Starting in the Abbasid period artisans used steatite, a soft stone often termed "soap stone" mined in the southern Arabian peninsula, for vessels (Hallett 1990). Diggers found steatite vessels, most commonly cooking pots, at numerous site.

Sculptors continued to use marble for church furnishings. In central Jordan, they often used bituminous limestone (oil shale) as a cheap local substitute, as at Umm al-Rasas (Piccirillo and Alliata 1994: passim).

Textiles

Cotton, wool, flax, and silk were the common fabrics. Excavators only rarely recovered fragments in the dry environment of the Negev and the Dead Sea-Arabah Valley, or in a carbonized state as at Pella. The wall paintings of Quṣayr ʿAmra and the stucco statues at Khirbet al-Mafjar offer a better idea about the clothes that people wore in the Early Islamic period.

At Kefar Shahak in the southern Negev twisted yarn consisting of a mixture of dark goat hairs and yellowish sheep's wool dates from the seventh century (Sorek and Ayalon 1993:17*). At Nessana, excavators found linen, cotton, wool, and silk (Sorek and Ayalon 1993:33*; Colt 1962:92-105). Although it is not possible to date the individual pieces, some are Byzantine and none are definitely Early Islamic. At Pella, in the 749 earthquake destruction, excavators found some small carbonized fragments, probably of silk and with a variety of weave (McNicoll et al. 1992:257-65).

The floors of plastered vats in an installation in al-Ramla were covered with hematite, possibly an indication of their use for dyeing cloth (Sorek and Ayalon 1993:11*).

Inscriptions

The Arabic inscriptions from the Early Islamic period are well-studied and a number have already been cited. The monumental inscriptions have been published since the early years of the twentieth century in the corpus of Max van Berchem (1922-27) for the city of Jerusalem and in the *Repertorie d'Épigraphie Arabe*, which lists chronologically all known Arabic inscriptions from the beginnings up to the Mamluk

period (Combe, Sauvaget, and Wiet 1931-56). Moshe Sharon is working on a new *Corpus Inscriptionum Arabicarum Palaestinae* and Frederic Imbert is working on a corpus of Arabic inscriptions in Jordan (see Imbert 1991, 1995).

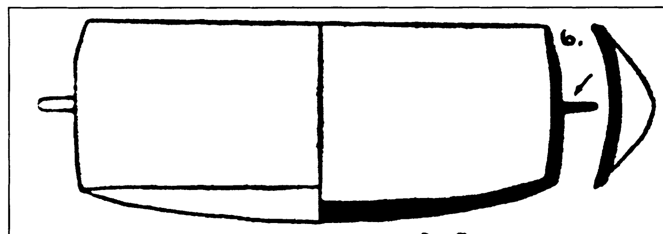
Meanwhile, excavators continue to find numerous new inscriptions and graffiti. Recent archaeological surveys of the Negev revealed inscriptions of particular interest. These graffiti provide new insights into the Early Islamic period. For example, in the Har Nafha area in the Negev, one rock inscription—a prayer for forgiveness—dated to 738 in the caliphate of Hisham, refers to the Lord of Moses and Aaron (Sharon 1990:12.IV:14-16). Another inscription from the eighth century records the Quranic mystery letters of KYHᶜS (Sura 19), demonstrating their independent character (Sharon 1990:90.1:30, note 32:35).

One of the earliest physical traces of the new Umayyad government is the inscription commemorating the renovations of the baths at Hammat Gader, southeast of the Sea of Galilee, that Muᶜawiya undertook in 662. The inscription is written in Greek and identifies the caliph with the Arabic title *Amir al-Muᵓminin* (Commander of the Faithful) transliterated into Greek. Curiously a cross marks the inscription (Green and Tsafrir 1982). That inscription demonstrates the continued prestige that Greek had up to the time of ᶜAbd al-Malik. Even though much of the population spoke Arabic even before the Islamic conquest, only one pre-Islamic inscription is known, dated to the second half of the sixth century at Umm al-Jimal (Combe, Sauvaget, and Wiet 1931-56:1:4-5, no. 4; Schick 1995:469-70).

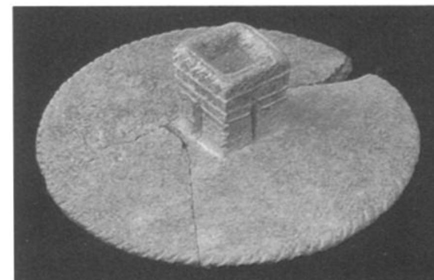
The date of a recently discovered inscription from Halhoul is purported to be 55 AH (675 CE; el-Azzeh 1990), which would make it the earliest Arabic Islamic inscription in Palestine. That reading is based on the assumption that the inscription is completely preserved. But traces of a last line are visible and, as Moshe Sharon (personal communication) argues, the date should be read as 255 AH (869 CE).

Although the textual integrity of the Quran is not in doubt, the Quranic passages in the mosaic decorations of the Dome of the Rock, dating to 692, are an early surviving record of portions of the text.

Artisans continued to write inscriptions in Greek, especially in the mosaic floors of Christian churches (Gatier 1992). Recent discoveries of dated mosaic inscriptions into the early Abbasid period have been cited earlier. It is noteworthy that the Christians continued to date their inscriptions by the era of the Byzantine province of Arabia and the Byzantine indiction year cycle for more than a hundred years after the Islamic conquest. But soon after the Abbasid revolution, the Christians switched in favor of a more politically appropriate era of the creation of the world. The illiterate repairs to damage to the Greek inscriptions at Umm al-Rasas suggest that a knowledge of Greek was dying out there by the end of the eighth century (Piccirillo and Alliata 1994:244, inscription 2; 247, inscription 4; 260, inscription 17). The first generations of the Abbasid period also mark when the local Christians began using Arabic in place of Greek or Aramaic/Syriac (see Griffith 1992).



A steatite vessel from Mount Nebo. This cooking pot was made of several pieces of steatite joined together by copper clamps. *From Saller 1941:300-1, no. 196, fig. 34.6.*



A lid to a cooking pot made of steatite from Humayma. Datable to the ninth-century, its handle is incised to look like a house.

The use of paper for writing, rather than much more expensive papyrus or parchment, only became common in the course of the tenth century, as demonstrated in the manuscript collection at the Monastery of St. Catherine at Mount Sinai (Atiya 1955).

Botanical/Faunal Analysis

Publications of paleo-botanical or faunal analyses are few and far between. Archaeological investigation of the Early Islamic period has not yet developed to the point where such anthropologically oriented questions are considered serious research topics. The recent publication of such results from the excavation of Naḥal Mitnan and Naḥal Shahaq, two small sites in the Negev, is a remarkable exception (Horwitz 1995; Kislev 1995).

The Early Islamic period saw the introduction of numerous new crops into the Middle East, ushering in an agricultural revolution (Watson 1983; al-Hassan and Hill 1986:203-208). Many of these new crops, such as sorghum, Asiatic rice, hard wheat, sugar cane, cotton, citrus fruits, banana and plantain, watermelon, and spinach, among others, are from the tropical climate of South Asia and were not well suited for the cooler and drier climates of the Middle East. Their production entailed radical developments in agriculture, such as the introduction of a summer growing season, more intensive use of farm land, and developments in irrigation like the introduction of *qanats* (underground water channels) from Iran, as at Avrona in the Arava Valley, apparently in the Early Islamic period (Ron 1989).

This agricultural revolution would have encompassed Palestine, but archaeological investigation has made little contribution to a more nuanced understanding of this. The written sources, such as the Arab geographers, notably al-Maqdisi, and the Geniza documents, provide the basic information.

The Heshbon excavation in Jordan is one exception (LaBianca 1990), although rough phasing hampers the Heshbon report—either they treat the Islamic period as a whole, or lump the Early Islamic period in with the Byzantine period.

The Arabic inscription in situ in the north double church at Umm al-Jimal, datable to the second half of the sixth century. It is the only pre-Islamic Arabic inscription known in Palestine. Much of the population of Palestine, especially the tribes along the desert fringes, spoke Arabic even before the Islamic Conquests, but they did not use Arabic for inscriptions again until the end of the seventh century. *Photograph courtesy of Robert Schick.*

A stucco statue from the eighth-century palace of Khirbet al-Mafjar in Jericho. The statue shows a figure, perhaps representing the caliph, standing on two lions. Traces of paint can be seen on the statute, one of many from the site now on display in the Rockefeller Museum in Jerusalem. *Photograph courtesy of the Rockefeller Museum.*

At Heshbon, excavators commonly found barley, bread wheat, bitter vetch, and pigweed in the Islamic periods (LaBianca and Lacelle 1986:fig. 7.1:126-27, table 7.2:136; LaBianca 1990:table 7.1:220). Also between the Byzantine and Abbasid periods at Heshbon, there was an increase in the proportion of sheep and goat versus cattle, and camel versus horse, suggesting a shift from plow agriculture to herding (LaBianca 1990:218). It is difficult to determine what impact the agricultural revolution had on the size of the population in Palestine.

Botanical and faunal analysis could shed light on research questions such as the impact of Islamic religious beliefs on food production. For example, how thoroughly were all the pigs in Syria killed in 694-95, as reported by Theophanes? (Turtledove 1982:65, a.m. 6186). At Heshbon, pigs formed 9.2 per cent of the total domesticated animals in the Byzantine period, but had dropped to 1.5 per cent by the Ayyubid-Mamluk period (LaBianca and von den Driesch 1995:73). But pigs were still present. Domestic pig bones were also found in small numbers at Pella in the Abbasid complex (Walmsley et al. 1993:218-21), as well as at Arsuf in the ninth century (Roll and Ayalon 1987:73). How was wine-production affected? LaBianca and Lacelle (1986:fig. 7.1:126-27, table 7.2:136) note a drop in grape pips at Heshbon from the Roman-Byzantine period, which they suggest perhaps reflects a drop in wine production. A number of verses of poetry in the Umayyad period praise the wines of such places as Beit Ras and Umm Qais in northern Jordan (see Schick 1995: passim for references).

Among the other rare analyses, scientists showed that the seven camels that were killed by the 749 earthquake in a stable at Pella probably were hybrid Bactrian-dromedary (Köhler-Rollefson 1989). Also at Pella, excavation of a stable in Area IV uncovered other victims of the 749 earthquake, including donkeys, chicken, and a cat (McNicoll et al. 1992:185-86). At the Abbasid complex in Area XXIX at Pella, workers found some sixteen types of animals (Walmsley et al. 1993:218-21). Sheep/goat predominated, with chicken and cattle also present in substantial numbers.

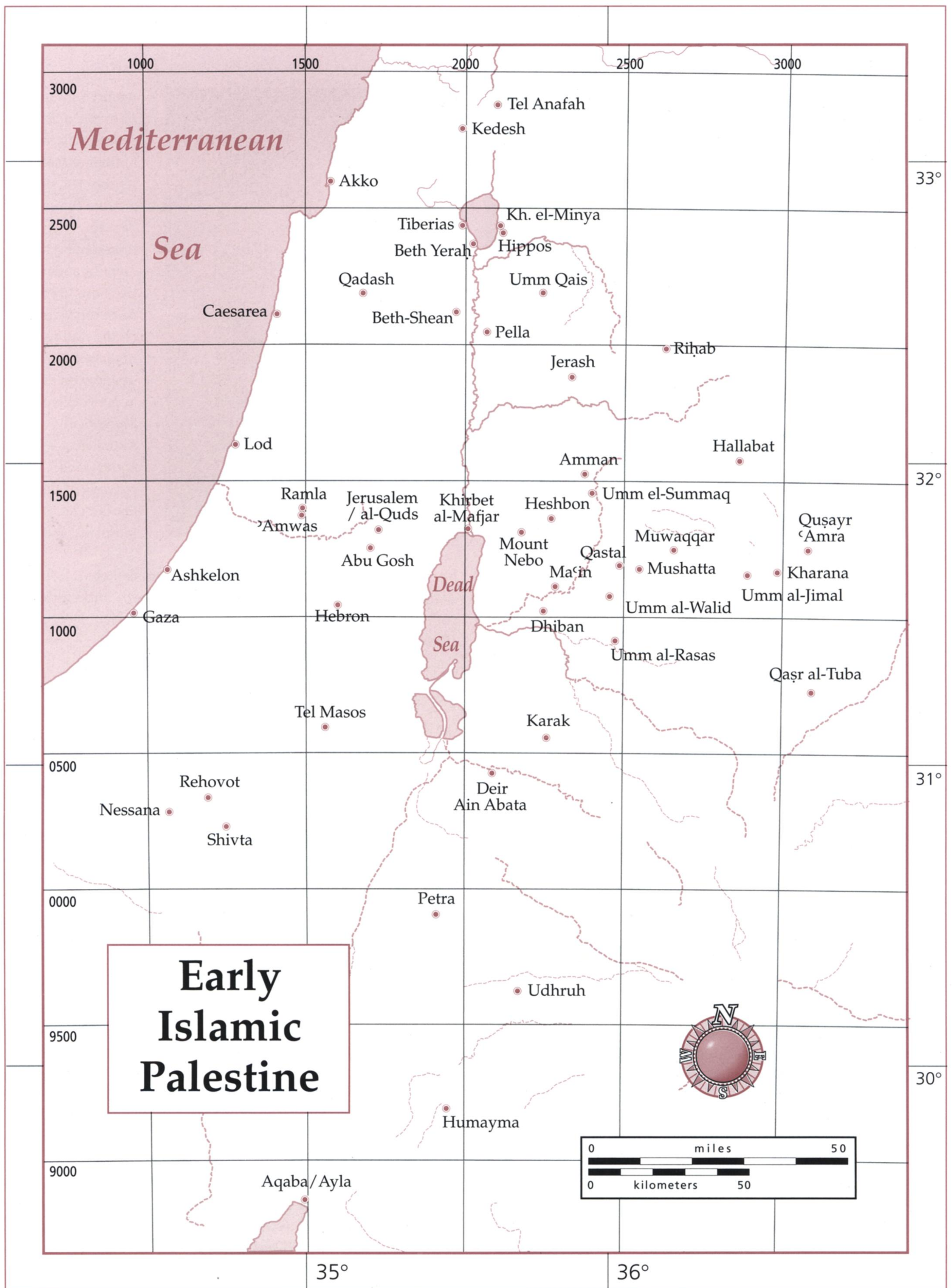
Human Osteology

Studies of human skeletal remains are rare, although excavators have found plenty of skeletons datable to the early Islamic periods over the years, such as the victims of the 749 earthquake at Pella (McNicoll et al. 1992:215-26).

Art and Architecture

Islamic art and architectural history in the early Islamic period are major topics of their own and can scarcely be examined in depth here. Beautiful mosaic floors continued to grace many churches, as noted earlier. The eighth-century mosaics at the church of St. Stephen at Umm al-Rasas are exceptionally important for the vignettes of various cities on both sides of the Jordan River and Egypt (Piccirillo and Alliata 1994; Piccirillo 1994). Mosaics continuing the Byzantine tradition were also used for a time in some Muslim buildings, such as the Umayyad palaces of Khirbet al-Mafjar, Qastal, and Qaṣr Hallabat (Piccirillo 1994:343-53). There may have been a recycle market for mosaic cubes, perhaps evidenced by the mosaic floors that were completely removed carefully at Umm al-Jimal from the Numerianos church and Julianos church (Corbett 1957; Schick 1995:470-72, pl. 24). Wall mosaics (both exterior and interior) decorated the Dome of the Rock.[5]

Stucco carving was widely used in the Umayyad palaces, most spectacularly at Khirbet al-Mafjar, where the excavations uncovered a variety of geometric and floral motifs, as well as sculptures of many animals, and people, including an apparent statue of a caliph, and carved stone and painted plaster (Hamilton 1959). Ornately carved wooden panels used in the al-Aqsa Mosque (Hamilton 1949; Creswell 1940:127-37) are also of exceptional artistic interest.



Early Islamic Palestine
Mediterranean
Sea
Tel Anafah
Kedesh
Akko
Tiberias
Kh. el-Minya
Beth Yerah
Hippos
Qadash
Umm Qais
Caesarea
Beth-Shean
Pella
Rihab
Jerash
Lod
Hallabat
Amman
Ramla
ʾAmwas
Jerusalem / al-Quds
Khirbet al-Mafjar
Heshbon
Umm el-Summaq
Qusayr ʿAmra
Muwaqqar
Mount Nebo
Qastal
Abu Gosh
Maʿin
Mushatta
Kharana
Ashkelon
Dead Sea
Umm al-Jimal
Umm al-Walid
Gaza
Hebron
Dhiban
Umm al-Rasas
Qasr al-Tuba
Tel Masos
Karak
Rehovot
Nessana
Deir Ain Abata
Shivta
Petra
Udhruh
Humayma
Aqaba/Ayla
miles
kilometers
0
50
N
E
S
W
1000
1500
2000
2500
3000
0500
0000
9500
9000
33°
32°
31°
30°
35°
36°

The wall paintings at Quṣayr ʿAmra, known since Musil's discovery at the turn of the century, and cleaned and documented by a Spanish team in the 1970s (Almagro et al. 1975) are now being meticulously documented by Vibert-Guigue (1995). Painted plaster also decorated the palace at Qaṣr Hallabat (Bisheh 1993:51-52). Excavators found painted plaster geometric designs and ivory inlay in the Abbasid family palace at Humayma (Oleson et al. 1995). Excavations in Aqaba also revealed ivory inlay (Whitcomb 1994a). A ninth-century potter's workshop from Hammat Tiberias contained lumps of yellow orpiment and red realgar—minerals generally used for painting frescoes (Sorek and Ayalon 1993:11*-12*).

Builders used stone alone to construct virtually all the monumental buildings in the early Islamic period. The Umayyad palaces of Mushatta and Qaṣr al-Tuba are rare examples where workers used brick for arches and vaults, revealing an Iranian influence. The use of lime mortar was standard. Almagro (1995) notes the unusual use of gypsum mortar in two of the Umayyad palaces—Kharana and the Amman citadel, again revealing an Iranian influence, matching their Iranian-influenced architectural and artistic styles. Workers used wood for the domes in the Dome of the Rock and the al-Aqsa mosque in Jerusalem (Abu Khalaf 1995).

Conclusion

The field of archaeology of the Early Islamic Period has come of age. The time has passed when the Islamic Conquest could serve as a cut-off date for archaeological investigation, leaving the study of the period to historians. The burgeoning amount of archaeological work in the period is clarifying many aspects of Early Islamic society that cannot be adequately addressed, if at all, from historical sources alone.

Notes

[1] See Prawer and Ben-Shammai 1996; Peeters 1993; Goitein 1982 for recent histories of Islamic Jerusalem; Bahat 1996 and Rosen-Ayalon 1996 are the best summaries of the archaeological remains; Bieberstein and Bloedhorn 1994 provide a comprehensive bibliography of the archaeological sites.

[2] Sauer 1986, 1992, 1994; Magness 1993; Sodini and Villeneuve 1992, and especially the collected papers in Villeneuve and Watson forthcoming; Herr 1996 is a handy bibliographic source.

[3] For Pella see McNicoll, et al. 1982; Walmsley 1993, 1995; Smith and Day 1989. For Jerash, see various articles in Zayadine 1986 and *Syria*, vol. 66 [1989] . For Aqaba, see Whitcomb 1988b, 1989a, 1989b, 1989c; Melkawi, Amr, and Whitcomb 1994. And for Umm al-Rasas and the Madaba-Mount Nebo area, see Alliata 1990, 1991, 1992; Acconci and Gabrieli 1994, among others.

[4] See, for example, Watson 1992, where sixteen different ware types are identified for the seventh century at Pella, and Walmsley 1995, who identified nineteen main ware types in Umayyad and Abbasid Pella

[5] These were studied in great detail by Marguerite van Berchem (Creswell 1932:149-228). See Rosen-Ayalon 1989 for color photographs.

Abbreviations

AASOR: Annual of the American Schools of Oriental Research
ACOR: American Center of Oriental Research
ADAJ: Annual of the Department of Antiquities of Jordan
ASOR: American Schools of Oriental Research
AUSS: Andrews University Seminary Studies
AW: Antike Welt
BA: Biblical Archaeologist
BAR: Biblical Archaeology Review
BASOR: Bulletin of the American Schools of Oriental Research
EI: Eretz-Israel
ESI: Excavations and Surveys in Israel
IEJ: Israel Exploration Journal
IES: Israel Exploration Society
INJ: Israel Numismatic Journal
JAOS: Journal of the American Oriental Society
JNES: Journal of Near Eastern Studies
LASBF: Liber Annuus Stucii Biblici Franciscani
NEAEHL: The New Encyclopedia of Archaeological Excavations in the Holy Land
OEANE: Oxford Encyclopedia of Archaeology in the Near East
PEQ: Palestine Exploration Quarterly
RB: Revue Biblique
SHAJ: Studies in the History and Archaeology of Jordan
SJOT: Scandanavian Journal of the Old Testament
TA: Tel Aviv
ZDPV: Zeitschrift des Deutschen Palästina-Vereins

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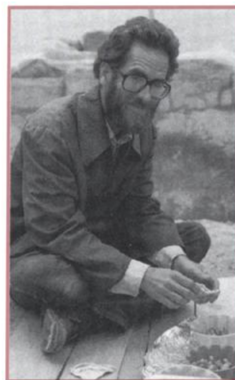

Robert Schick is currently the Islamic Studies Fellow at the Albright Institute in Jerusalem and teaches at the Institute of Islamic Archaeology, al-Quds University, and the Palestinian Institute of Archaeology, Bir Zeit University. He has participated in many archaeology excavations of Byzantine and Early Islamic sites in Jordan, among them, Humayma, el-Lejjun, Petra, Aqaba, Deir Ayn Abata, and Umm al-Rasas. He received his Ph.D. from the University of Chicago in 1987. His book, *The Christian Communites of Palestine from Byzantine to Islamic Rule*, was recently published by Darwin Press, Princeton.

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