

CHAPTER 4

MATERIAL CULTURE OF THE IRON AGE PERIOD RELATED TO
ISRAEL, JUDAH, AND THE NEIGHBORING LANDS.

4.1 Introduction

This section is an introduction to the material culture of the Iron Age Period related to Israel, Judah, and neighboring lands. The details of ancient sites mentioned in this section will be discussed in Chapter 5, dealing with the archaeological excavations and biblical interpretation of cities related to the time period covered in this dissertation.

This writer found the outline prepared by Amihai Mazar in his book, *Archaeology Of The Land Of The Bible, 10,000-586 BCE* to be very well organized on the subject of the material culture of the Iron Age Period. For this reason this writer has followed a similar outline such was presented in Mazar's book (Mazar 1990).

There are a number of views on the inner division of the Iron Age in relationship to the archaeological periods of Israel and neighboring lands. After reading several references on this subject, the writer of this dissertation has selected to use the chronology table found in the *New Encyclopedia of Archaeological Excavations In The Holy Land* (Stern 1993:1529). The divisions of this chronology are:

Iron Age	1A	1200-1150	BCE
Iron Age	1B	1150-1000	BCE
Iron Age	11A	1000-900	BCE

Iron Age 11B	900-700	BCE
Iron Age 11C	700-586	BCE

4.2 POTTERY

4.2.1 General Introduction to Pottery

Pottery vessels played an important role in almost every aspect of life in Canaan, ancient Israel and Judah, and their neighboring lands. They provided a continuous record of changes in economic conditions, technology and social values. For those reasons, pottery, whether whole or in fragments, serves the archaeologist as a chronological indicator which helps us to elucidate the history of people throughout all periods of biblical times.

Before going into the specific details of the pottery in Iron II A-B and C that relate to the time period of this research, 876 BCE to 721 BCE, a general summary of the background of this topic will be provided.

Pottery Manufacturing

The clay from which pottery is produced is an aluminum silicate mixed with various additions, such as iron oxides, alkalis, quartz, and lime. Two kinds of clay have been differentiated: clean clay, of pure aluminum silicate, which is found in Israel and rich clay, consisting of aluminum silicate mixed with iron oxides, carbon compounds, etc. The material was prepared for use by sifting and removing foreign matter, mixing it with water and levigating it. If the clay was too rich and not sufficiently plastic, it was tempered by the addition of substances such as sand and quartz grit. The wet sift clay

was then wedged by hand or treaded; after it was well mixed it was ready for shaping. The earliest pottery was completely hand made. In the Neolithic period, pottery was made by joining together coils of clay and then smoothing the junction lines by hand. The pottery was shaped on a base stand of wood, stone, or matting. A technical innovation was shaping pottery from a ball of clay. In the Chalcolithic and Early Bronze periods primitive potters' wheels have been found in excavations in Israel. They consist of two horizontal disks placed one on top of the other. The lower disk had in its center a conical projection upward. The upper disk had a matching indentation. The upper disk could be rotated by hand. See Figure 4.1-1a.

Several types of pottery were made on the wheel in the EB Age. It was extensively used in the MB. After the pot was shaped it was removed from its stand and set aside to dry to leather hard consistency. Then handles, base, spout, and projecting decorations, were applied. Various types of ornamentation were added such as slips and burnishing, paint, incisions, reliefs, and impressions. When the pot was completely fashioned, it was dried a second time. Usually in the later periods the pottery was always fired in an open or closed kiln at about 450° to 950 ° C. The best wares were produced at the highest temperatures in which combustible material was laid over the pottery. At a later stage the pottery was separated from the fuel by a perforated clay partition built above the fuel compartment. With the invention of the closed kiln it was possible to use an oxidizing fire, which produced pottery of a red color. Pottery of a black color was produced in a kiln which had an oxygen starved fire. This was accomplished by

partially obstructing the amount of air that entered the kiln.

The Israelite period shows favoritism for angular pottery shapes instead of the rounded outlines favored in the Canaanite period. In the finish and decoration of the exterior, there is a new approach. Little use is made of painted decoration, and only some faint echoes remain of the painting styles of the Late Bronze. Instead, the entire surface of the vessel or a good part of it is covered with a slip, mainly red, but also yellow, black, or brown, which is expertly burnished to a high luster. See Fig.4.1-1b.

Many of these developments are due to contacts with neighboring cultures, which served as catalysts for change in the local culture. Reflected in the local pottery styles are the influences of the relations with Phoenicia (apparently of more than merely commercial nature); with Cyprus (probably of commercial character); with the Aramean Kingdoms and with Assyria to the north, and with Egypt to the south (Amiran 1969:191).

Sir Flinders Petrie (b 1853 - d 1942) conducted the first excavation of a tell in Israel, after accumulating much knowledge and experience in ten years of digging in Egypt. While working at Tell el-Hesi, Petrie recognized the chronological value of potsherds in stratigraphical excavation and established a basic scale of dated sherds.

When he worked at Tell Nagila (a site located 19 miles East of Gaza, S.E. of Hesi), he discovered 14 strata showing Chalcolithic to the Mameluke period. Petrie compared these potsherds with others found at Jericho, Megiddo, and the Judean Desert Caves.

All field work or desk-work undertaken since then has contributed to a continuous progress in the study of

pottery and other aspects of archaeology as well. The main forms of pottery used in these studies are the: Bowl, Chalice, Goblet, Krater, Cooking-pot, Pithos, Jar, Amphoriskos, Jug, Juglet, Pilgrim-flask, Pyxis and Lamps.

The writer of this dissertation found that among various books reviewed on this subject, the best determinative text was compiled by Ruth Amiran. Her book, *Ancient Pottery of the Holy Land* gave a comprehensive analysis of the pottery of the Israelite period (Amiran 1969:208-308). Her description of pottery included form, use, style, location of finds, and cultural affinity.

4.2.2 Lamps

In Iron II A-B, the lamp with rounded base is the prevalent type in the North as well as in the South. Often such lamps have a wider and more pronounced lip than in the preceding period.

In Iron II C, northern lamps are usually smaller, the rounded bases have become wide and flat, and the rim is emphasized. In the South, a style developed. Its size is relatively small and the hollow cavity of the lamp was placed on a thick, high disc base (Amiran 1969:291).

Examples of this pottery were especially noted at Hazor, Megiddo, Ai, Beit Mirsim, Beth-Shemesh, Far'ah South and Megiddo (Amiran 1969:292-293). See Figures 4.1-2 and 4.1-3.

4.2.3 Israelite Pottery Iron II

Some of the features of the pottery of this period involved clay that was well levigated, polished and fired.

A red burnished slip predominated. Irregular hand-burnishing was primarily used, but in the making of bowls and jugs the wheel-burnishing was the method most often used. The term burnish is briefly described as smoothing the vessel walls by polishing, so that rough particles are driven inward and the smoother clay particles are aligned in such a way that the surface of the vessel is shiny and smooth. Slip, which is liquefied clay out of which coarse particles have been strained, may be used to improve the surface. Pottery, whether or not completely dry, can be dipped into a slip of creamy consistency (to which color is sometimes added); or the slip can be brushed on or trailed on to the vessel (Microsoft Encarta Encyclopedia 2000:s.v. "Pottery").

4.2.3.1 Bowls: Iron II A-B North and South.

4.2.3.1.1 North

Examples of this pottery were especially noted at Hazor, Abu Hawam, Samaria, and Megiddo (Amiran 1969:196-197).

Description of the bowls from Iron II A-B, North

(1) Carinated bowls

These bowls are identified by the carina or kneel of the pottery piece. In this period the walls of the bowls are carinated fairly high up, so that the part above the carination is relatively short. The carination is slight, almost approaching a rounded outline.

(2) Straight-sided bowls

The straight-sided bowls combined features of the carinated style with sides less curved and a high ring-

base. Megiddo and Samaria were the other sites where these bowls were discovered.

(3) Rounded bowls

This is one of the commonest forms, which can be subdivided into three main types:

(a) Shallow bowls with a low ring-base

(b) Round-bottomed-bowls

(c) Small, deep bowls with a small flat base. Some of the rounded bowls are decorated with painted alternating black and red concentric rings. These are applied without slip and filling the entire inner surface of the bowl.

(4) Deep bowls

The first bowl has a projecting ledge-rim; the second, a sharp, slightly inverted rim; and the third a slightly thickened rim. See Figure 4.1-4a.

(5) Bowls with bar-handles or a ridge below the rim.

(6) Bowls on three stump legs.

These appear in this period both in the North and in the South. They were mainly popular in Iron II C. Sometimes the body of the vessel is perforated like a sieve.

4.2.3.1.2 South Bowls Iron II A&B

Examples of this pottery were especially noted at Beth-Shemesh, Lachish, Far'ah(S) and Jemmeh (Amiran 1969: 198).

There were three main groups; rounded-carinated bowls; bowls with degenerated horizontal handles; and bowls with bar-handles. Albright defined some important features of Iron II pottery of the south through his analysis of the pottery found at Tell Beth Mirsim. He noted that the pottery was hand-burnished and had an irregularly slip. This slip was usually applied on the inside. Sometimes the

slip was applied on the upper part of the outside of the bowls. This method was also used on storage jars and kraters (Amiran 1969:106 and 199).

4.2.3.1.3 North and South Bowls of Iron II C

Examples of this pottery were from Hazor and Megiddo (Amiran 1969:202-203).

The bowls of Iron II C are a direct continuation of Iron II A-B forms and type. The carinated bowl becomes one of the commonest vessels of the period. The straight-sided bowl and the shallow bowl (platter) were frequently found. The rounded bowl, which was so common in Iron II A-B, appears in new variations; however, its use was starting to decline. The large deep bowls have several different rims which are distinguished as follows:

- (1) A flat rim that is thickened outward
- (2) A rim sloping inward and thickened on the outside
- (3) A rim sloping outwards and thickened on the outside, which is often grooved
- (4) A turned-over rim.

The rim is highly characteristic of bowls and kraters of various sizes made in southern Judah in Iron II C. These bowls with different rims were also found in the North which may mean that they were produced by potters in the South and imported to the North.

South Iron II C Bowls

Examples of these bowls were especially noted at Beth-Mirsim, Lachish, and Beth-Shemesh (Amiran 1969: 204-205). These bowls have turned-over rims and are the most frequently found during Iron II C in the South. The predominance of this rim is seen in southern bowls of all

various shapes and sizes. Some of the bowls are rounded but others are straight-sided. A strong identifiable characteristic was a light brownish-red slip on the inside and on the upper part of the outer wall, and regular wheel-burnishing all over the slip on the inside and the rim. An interesting vessel was a small bowl with a broad flattened base, flaring walls, and a sharp rim.

The southern straight-sided bowls were shallower than those in the North and had a wheel-burnish on the inside. The bowls classified with bar-handles actually had two knobs for handles with a small isolated ridge between them.

4.2.3.2 Samaria Bowls Iron II A-B and II C

Examples of this pottery were especially noted at Samaria, Hazor, Abu Hawam, Megiddo, Beth-Shemesh, and Qasile (Amiran 1969:207-212).

The term "Samaria Bowls" is generally used in archaeological literature, though it still lacks exact definition. The publications on the excavation of Samaria itself never used the term "Samaria Bowls" in discussing the pottery found there.

These bowls are divided into thin and thick walled bowls and have been found in Iron II A-B and II C.

The thin bowls are eggshell-thin and are a thoroughly baked ware. The slip is thick and continuously burnished on the wheel and in rare incidents was hand-burnished. The characteristics of the slip are very distinctive. It is predominantly red inside and outside or it has a red and yellow slip alternating in bands (See Figure 4.1-4b). At Hazor one of the vessels had thin black lines between the red and yellow bands.

The thick bowls have a form which is typical of the wares of this period. The primary difference is the burnished slip. One interesting characteristic is a bowl with a high-footed base such as was found at Samaria.

Another interesting base was found in a bowl from Jemmeh in which the base showed a stepped profile. Petrie gave a name of "Assyrian" to this bowl because the same style bowls were found in the palace of Kapara at Tell Halaf, Syria (Amiran 1969:212). These bowls, especially in Iron II C, are often decorated with bar-handles or with a ridge under the rim, as in the plain bowls.

4.2.3.3 Chalices and Goblets North and South

Examples of this pottery were especially noted at Megiddo, Abu Hawam, Beth-Shemesh, Far'ah(S), and Qasile (Amiran 1969:214-215).

Iron II A-B North and South

The basic shape of the chalice is traced back to Iron I. Two main types can be distinguished:

- (1) An open, rather shallow bowl on a high foot
- (2) A deep bowl on a low foot (Amiran 1969:213)

Rims and the foot profiles varied. Usually the chalices were plain, without decoration, slip, or burnish.

Contemporary with the chalice was the goblet. It has a spherical body, a relatively narrow neck, a low trumpet foot and is usually decorated. In the South the chalices were decorated with a pattern that looked like embroidery.

Iron II C North and South

The uses of the chalice begin to decline. Its form changed, this was evident by a decrease in size and it took on the appearance of a small goblet on a high stand.

4.2.5 Kraters

4.2.5.1 Introduction

Kraters during the Iron Age basically had the characteristics of their Canaanite prototypes in form, base, and rim. The decoration was noted often in the area of the handles. See Figure 4.1.5 a & b.

The new features of the Iron I period which often were carried over to Iron II A-B and C were:

- (1) Multiple handles four, eight, or more
- (2) Rope decoration in the handle-zone, this was more prevalent in the North than the South.
- (3) A rim thickened inwards and outwards, forming a ledge; this rim was important and very characteristic of this period of Israelite pottery.

In the south there were fewer kraters found. Examples of this pottery were especially noted at Beth-Shean, Megiddo, Tuleil, Ai, and Beth Mirsim (Amiran 1969:218-219). Other sites were Hazor, Samaria, and Abu Hawam (Amiran 1969:220-221). Another group was from Jemmeh, Far'ah(S), Ajjul, and Er-Ruqeish (Amiran 1969:222). Kraters from Iron II C in the North and South were Hazor, Megiddo, Far'ah (N), Lachish, and Qasile (Amiran 1969:223-226).

4.2.5.2 Kraters: Iron II A-B North and South

Six types were identified for this period and were classified as follows:

- (1) Kraters with pronounced carination
- (2) Kraters with a ridge in the area of the handles
- (3) Kraters with necks
- (4) Kraters that have a 'forked' rim, that is, a molded rim like a fork in profile
- (5) Kraters with horizontal handles and
- (6) Kraters without handles, often standing on three loop-feet

In Iron II the rims of the kraters are usually thicker and the multiple handles are less frequently noted. The eight-handled kraters are drawn from the middle of the neck towards the carination. An added form of decoration is a reed impression.

4.2.5.3 Kraters: Iron II C North

The kraters had a slip on the outside which was usually burnished and at times it had a red band on the rim. They had a pronounced carination and a thick inverted rim which was leveled off at the top. (Amiran 1969:223). The handles were attached to the upper part of the vessel which is separated from the rest of the body by a ridge and forms a neck, which is often inclined inwards. This group is identified by fine plastic decoration near the bar-handle. The holemouth krater-bowls without the handles were found and decorated with painted bands on the upper part, or with a slip, plain or burnished.

4.2.5.4 Kraters: Iron II C South

Only five specimens from southern sites could be collected. They were similar to each other in the following characteristics:

- (1) They had an amphora-like form
- (2) The rim was usually turned-over
- (3) The crater resembled the deep bowls
- (4) The ones found at Tell Qasile resembled those from the north, and
- (5) There were some that were very large with many handles such as were common in the Iron I form (Amiran 1969:223).

4.2.6. Cooking Pots

The Iron Age cooking-pot is directly descended from its Canaanite prototype. It developed in the North and in the South along distinctive lines. The clay of the cooking-pot in these periods is also easily distinguishable. It is full of white calcite grits, which seem mostly to be smaller than those in the Late Bronze. Examples of this pottery were especially noted at Megiddo, Hazor, Abu Hawam, Far'ah (N), Beth-Shemesh, Nasbeh, Ein Gedi and Ai (Amiran 1969:75-76, 228-230). See Figure 4.1-6a for cooking-pot, Iron II, Beth Shemesh.

Iron I These pots were fairly shallow with a carinated body and a rounded base, and generally did not have handles. The rim is elongated and triangular in section. In all periods, the rim was the most distinguishable in dating the cooking pots. The elongated rim with triangular section first appeared in Iron I in different variations.

Iron II A-B The cooking pots of this period did not change from Iron I, except for the lower carination. The handles were more common. The more rounded shape of the pot was becoming common in the South. The Northern material indicates clearly that the rims are still triangular and are generally shorter than in Iron I.

Iron II C There were changes which began to occur in this period in the cooking-pots, both in the South and in the North. The form has a slightly squat body, the carination has almost disappeared, and the pots always have two handles. The rim has become stepped or ridged and appears in many variants.

Iron II C South The cooking-pot and its variants follow the same lines of development as in the North. There was a new type that developed not earlier than the 8th century. This is a deep cooking-pot, almost as wide as it is high, with a well-developed neck and two handles drawn from the rim to the shoulder. The neck is often ridged all over.

4.2.7 Pithoi

Many of the characteristics of the pithoi jar from the Late Bronze are found in the Iron Age pithoi. Those found at Megiddo, Bethel, and Shiloh show further development. The neck became short and there was only a ridge at the base. This pottery was named by Albright as "collared rim" jars because of the ridge. Pithoi vessels were also found in a number of other sites such as Tell Beth Mirsim, Tell el-Ful (Gibeon), Hazor, Afula, Ai, and Tell en Nasbeh (Amiran 1969:234-235).

4.2.8 Storage Jars

Examples of this pottery were especially noted at Hazor, Megiddo, Samaria, Far'ah (S), Lachish, Beth Mirsim, Beth-Shemesh, Gibeon, and Nasbeh (Amiran 1969:79-82 and 244-248). See Figure 4.1-6b for an example of a storage jar of Iron II that was found at Beth-Shemesh.

Forms of the Iron II period basically developed from Iron I. The four main ones were:

- (1) Ovoid body and ridged neck
- (2) Ovoid body and straight neck
- (3) Jars which have a spout and occasionally are decorated with painted bands or metopes
- (4) Multi-handled jars

4.2.8.1 Storage Jars Iron II A-B North

Besides the basic forms, new ones developed. These included:

- (1) Ovoid jar with a pronounced shoulder and ridged neck
- (2) Ovoid jars with straight necks
- (3) The sausage-shape jar with pronounced shoulder
- (4) Painted jars of various forms, with straight, relatively high necks: the decoration usually consists of red painted bands in the handle-zone. Sometimes a single ornament appears between the bands, a highly stylized tree or zigzag pattern.
- (5) Holemouth jars begin to appear.

4.2.8.2 Storage Jars: Iron II A-B South

In the South the jars were divided into three groups:

- (1) Ovoid jars with pronounced shoulders
- (2) High-necked jars with a ridge in the middle of the neck, from which two or three handles, are drawn to the shoulder. The jar has a burnished red slip.
- (3) High-necked jars with the handles extending directly from the rim.

4.2.8.3 Storage Jars: Iron II C North

In the North five main groups were found:

- (1) Ovoid jars with a ridged neck
- (2) Sausage-shaped jars with a pronounced shoulder
The neck is so short that it often is only a rim. Rims vary from straight, concave or lightly ridged. The difference between these two groups (Ovoid and Sausage-shaped) is the quality of the clay. Jars in Group 1 are characteristic of brown-grey, gritty, and medium-baked clay. The jars of Group 2 are well levigated and well-baked therefore giving off a metallic sound. They are yellowish-pink in color.
- (3) The jars are ovoid in shape, but they have straight necks and rill-like rims. They were often painted with red bands on the neck, shoulder, and body.
- (4) Holemouth jars with variation in the rims, some were grooved or inverted.
- (5) Jars with three handles and spout. The mouth of the spout served as a seat for a dipper-

juglet, in order to catch and return to the vessel any liquid dripping from the juglet after use. These were sometimes called pillar-handle. The jars came in two types of clay and decoration. The ones that had a metallic sounding were decorated with grooves on the shoulder. The other jars were of "fatty" ware with red slip or red painted bands. A jar like this was found at Gibeon. What was especially interesting about it was the Hebrew inscription on the handle which was the name of its location, "Gibeon."

(Amiran 1969:241).

4.2.8.4 Storage Jars: Iron II C South

The following jars were found in the South:

- (1) Ovoid jars with a wide, rounded shoulder, generally four handles, a relatively high, tapering neck, and a thickened rim
- (2) Ovoid jars with ridged necks were uncommon
- (3) Holemouth jars, constitute the second widely distributed group in the South, and appear in extremely numerous variations, especially as to the rims.
- (4) Sausage-shaped jars; these were not as common as those in the North, the jars are shorter, rims are shorter, and they have a pointed base.
- (5) Jars with three handles and spout, those in the South formed a more narrow neck and rim
- (6) Jars with narrow, ridged necks and two handles drawn from the ridge to the shoulder

(Amiran 1969:242).

4.2.9 Amphoriskoi

A certain type of small jar, the so-called amphoriskos, which is found in all three phases of the Iron Age, derives from the Canaanite jars and amphoriskoi of the Bronze Age.

The basic characteristics are a narrow, straight, relatively long neck, usually a pointed bottom or in the later forms it had a base, and jar handles placed on the carinate portion of the jar. These jars were often decorated with blank lines and some were made of glass, such as those discovered in Egypt. They were found in the North, South and Transjordan in Iron I, II A-B and II C. Examples of the Amphoriskoi jars were especially found at Far'ah (S), Beth-Shemesh, Hazor, Nasbeh (Mizpah), Lachish, and at Amman, Jordan (Amiran 1969:248-249).

In Iron II A-B, the amphoriskos appears to have lost some of their popularity and the ranges of types were limited.

During the Iron II-C period there were a number of variants of the amphoriskos in Israel/Judah and in the Transjordan. The bottom base remained thickened and flat. The Ammonites in Transjordan produced some that had duck heads for handles. This style appears to have been adopted from the Assyrians. During this time period, similar ones were in use at Nimrud (Amiran 1969:250).

4.2.10 Jug and Juglets

The Iron II A-B and C jugs and juglets continued the primary form of those types from Iron I. Examples of this pottery were especially noted at Hazor, Megiddo, Far'ah(S), Gezer, Ai, Beth-Shemesh, Samaria, Abu Hawam, Far'ah (N) and Beth Mirsim (Amiran 1969:252 - 265). See Figure 4.1-7.

4.2.10.1 Basic Characteristics of Jugs and Juglets in Iron II A-B and II C North and South

Jugs:

- (1) Large jugs with short, wide necks, trefoil mouth, and handles drawn from rim to shoulder, often with a red slip.
- (2) Large jugs with high, cylindrical neck, and handle drawn from rim to shoulder.
- (3) Jugs with bi-conical body, rim diameter equal to base diameter, without neck, and handle drawn from rim to shoulder; this type goes back to the bi-conical jugs of the Late Bronze Age.
- (4) Another jug has a long neck and a handle from the center of the neck to the shoulder; the body is generally piriform (pear shaped), and most of the specimens are decorated or have a slip; the types appear in many variants and derive from a certain type of "grey juglet" of the Late Bronze Age.
- (5) Jug with metope decorations, again traced back to Late Bronze Age.
- (6) Jugs with trough-like strainer-spouts. The handles of these are usually at right angles to the spout. They are painted with black and red metopes. It is interesting because this style was like that of the pilgrim flasks and jugs that had bichrome decorations.

Juglets

Most of the juglets have a trefoil mouth, an ovoid body, and a slightly pointed base. However, the

juglet with cylindrical body and wide base often had a blunt point. See Figure 4.1-7.

4.2.10.2 Additional information about Jugs in the South from Iron II A-B and C

Examples of this pottery were especially noted at Far'ah (S), Ai, Gezer, and Beth-Shemesh (Amiran 1969:254-255). There were some different types. This analysis came from the comparison of material found in tombs excavated at Tell el-Far'ah and Gezer. Jugs from the Philistine area of this time period will be covered in a separate section.

Jugs: South Iron II A-B

- (1) Piriform body, straight or slightly concave neck, often a trefoil mouth, ring-base, and handle drawn from rim to shoulder.
- (2) These jugs have a thickened button-shaped base characteristic mainly of contemporary storage-jars.
- (3) Squat jugs with globular body, ring-base, wide neck, and handle drawn from rim to shoulder; this type became popular during the late Iron Age, especially in the South.
- (4) Painted jugs were of two types, the Cypriot bilbil and North style.
- (5) Jugs with trough-like strainer-spouts. These had basket handles, painted on the bodies and the handles were classified with the Philistine ware.

Jugs South II C

The examples of this pottery were found at Lachish and Beth Mirsim (Amiran 1969:264-265).

The jugs had a wide neck and trefoil mouth, they were globular, squat, shot necked, and handles drawn from rim to shoulder, red slip was predominate. The decanter style was also found like the one in the north.

4.2.10.3 Additional information about Jugs in the North from Iron II C

Examples of this pottery were especially noted at Megiddo, Hazor, and Far'ah (N). (Amiran 1969:260-261).

This material was classified by the following:

- (1) One of the most distinctive forms was the decanter which was seen in the North and South. The shape of the body and the generally ridged neck, with the handle drawn from the ridge, are common to all the members of this group. What is important is the fact that there were differences between the north and south (Amiran 1969:259).
The main features of the northern decanters are the double, deeply grooved rim, splayed like a funnel, the metallic well-baked ware, and the frequently found group of grooves on the shoulder. There are also some decanters of 'fatty' ware, which is not well-baked, with a red slip (Amiran 1969:259).
- (2) Some jugs were bichrome with a ridged neck.
- (3) Jugs with trefoil mouths, plain neck, painted with red or black bands on the body.
- (4) Jugs with short trough-like strainer-spouts.

- (5) Jugs with trefoil necks and red slip that resemble the Phoenician-Israelite pottery. See Figure 4.1-9 a & b.
- (6) Jugs with narrow necks and thick rims.
- (7) Jugs with inverted rims, globular bodies, short necks, and round base (Amiran 1969:259).

4.2.10.4 Additional information about Juglets Iron A-B North and South

North: The primary forms as described above continued. The "black" juglets started to appear in Iron II. They were usually grey with a burnished black slip, sometimes the clay was pinkish-brown and the burnished slip was light in color. These juglets usually had a long narrow neck (Amiran 1969:256). Examples of this pottery were especially noted at Hazor, Megiddo, Samaria, Abu Hawam, Megiddo, and Sa'idiyeh (Amiran 1969: 257). See Figure 4.1-8a.

South: The "black" juglet was found. Examples of this pottery were especially noted at Far'ah(S), Beth-Shemesh, and Lachish (Amiran 1969:258). Some juglets were the common dipper juglet. See Figure 4.1.8-b

4.2.10.5 Additional information about Juglets North and South Iron II C

North: The juglets were dipper juglets with ovoid and cylindrical forms. They had a basket handle and a spout. The black juglet and more of the tiny amphoriskos were found.

South: The types of juglets found were piriform bodies, narrow necks, handles drawn from the rim, and black juglets. Like the north they had a spout and basket handle.

4.2.11 Philistine Pottery

4.2.11.1 Introduction to the Philistines and Philistine Pottery

Philistines were part of a maritime group known as the Sea People. They had a strong political and cultural influence on the people of the Near East during the second millennium BCE. By the end of the Bronze Age they had gained control of most regions in the eastern Mediterranean. They established new cities and remained powerful during the early Iron Age and their power continued into the Iron II period (Blaklock and Harrison 1983:361-362). An interesting and descriptive Egyptian source that told about the Philistines was a record from the eleventh-century BCE titled, "The Journey of Wen-Amon to Phoenicia" (Pritchard 1973:16-24). This papyrus is currently in the Moscow Museum. It is from el-Hibeh in Middle Egypt and dates to the early Twenty-first Dynasty, shortly after the events it relates.

Philistine pottery is a complex specialized study that has drawn the attention of archaeologists, scholars and historians of the ancient Near East for years. The origin of Philistine pottery in Palestine was actually identified by archaeologists who had worked with Cretan-Aegean archaeology; among these were Dr. F. B. Welch and a Dr. Mackenzie. Dr. Welch wrote about this subject in 1900, in his article titled, "The Influence of the Aegean Civilization on South Palestine."

During 1911-1912, Dr. Mackenzie determined the stratigraphic relationship of the pottery found at Beth-Shemesh with the Philistines and related the pottery style to the Aegean world (Amiran 1969:266). Since that time, one archaeologist who stands out for her work on the Philistines and their culture is Dr. Trude Dothan. She has written numbers articles and books on the Philistine culture.

4.2.11.2 Some locations where Philistine pottery was found in Canaan, Ancient Israel and Judah

Philistine Pottery was found at a number of sites primarily in the areas of ancient Philistia and Judah. The following is a list of some of these primary sites: Gaza, Jemmeh, Tell el-Far'ah (S), Ashkelon, Ashdod, Tel Qasile, Joppa, Gezer, Ekron, Timnah, Beth Shemesh and Gath. Other places included Gerar, Beth-Shean, Taanach, Megiddo, Afula, Dor, and Hazor in the north.

4.2.11.3 Features of Philistine Pottery

Philistine pottery is placed into two forms, Mycenaean and local Canaanite. The Mycenaean character can be seen in the kraters as shown in figure 4.1.5a-b. The stirrup-jar, the elongated pyxis, and an example of the local Canaanite form of a beer-jug are seen in figures 4.1.10a-b-c.

Decoration: The decorations on the Philistine pottery usually covered the upper and middle parts of the body, the shoulder and the central zone. On each of these, usually in the central zone, was a frieze of the metopic order: these triglyphs consist of straight or wavy lines, enclosing sometimes a vertical row of semicircles with a

dot in each. The metopes may contain a geometric pattern, like spirals, concentric circles enclosing a cross, checkerboards, lozenges, or a bird-motif. These were very characteristic of Philistine pottery. The bird was shown in two positions, generally the head is turned backwards, with the beak thrust under the wing-feathers and the other was showing the bird looking straight ahead. Generally this decoration was in black and red on a white slip, but it also occurs in one color, with or without the slip. These styles of decoration occur on all types of Philistine pottery (Amiran 1969:266-267).

More examples of styles and types of Philistine pottery are shown on Plates 90 and 91 from Amiran, pages 268 and 269. These examples came from Gezer, Beth-Shemesh, Ashkelon, Far'ah (S), Hazor, Abu Hawam (located by modern Haifa), and Carmel.

4.2.12 Phoenician Pottery

The term Phoenician Pottery came to be used in describing the pottery that was excavated primarily from the excavation of Akhziv which was within the border of the Northern Kingdom of Israel. The focus for the description of this pottery and its relationship to other areas of ancient Israel and Judah where it was found will be used in describing this pottery.

Iron II A-B The main characteristic was a vessel that was highly burnished and had a thick dark-red slip. The walls were thick and heavy. An example of an Iron Age II Phoenician Red-slip juglet is from Beth-Shean. See Figure 4.1-9b.

Iron II C showed vessels that were similar to those of Iron II A-B. The necks of the vessels were more conical in shape and they had a broad, mushroom-like rim. Examples of this pottery, in addition to Akhziv, were also found at Hazor, Megiddo, Samaria, and Lachish (Amiran 1969:274-275).

4.2.13 Cypriot and Cypro-Phoenician Wares

4.2.13.1 Introduction to Cypriot Pottery

The Iron Age pottery of Cyprus, unlike the pottery of the Cypriot Bronze Age, was mass produced in standard shapes and wares. The mass production led to poorer quality and the finished products were more flawed. Regardless, the Iron Age Cypriot pottery was still very colorful and often elaborately painted with geometric or figural motifs. Commonly seen were the concentric circles which were painted onto jars, juglets, bowls and kraters. Finer wares like plates, bowls and jugs were made on the fast wheel. Larger forms like amphorae, amphoroid kraters and pithoi were made with a combination of techniques: wheel throwing, hand coiling or molding (Mertens 2000a:1-2).

4.2.13.2 Description of the Primary Types of Cypriot Pottery

Cypriot pottery is described by Mertens (Mertens 2000a:1-3).

Fig. 4.1-11a. The style on this jug is an example of what is called, "Free-field Style". It is characterized by large, elaborate pictures of humans and animals on light backgrounds. Highlights were often painted on in red. This

type is unique to Cyprus. This particular jug uses the swastika as a decoration. At that time, swastikas were generally considered to be good luck symbols representing sun, fire, or continuing creation. They were found in Egypt, Greece, and China. The swastikas are shaped like a Greek cross with ends bent at a 90-degree angle. Other decorations on this pottery included multiple chevrons (figure pattern having the shape of a V or inverted V), and prophylactic eyes on the trefoil rim. This jug also has a series of dark lines on its side. These are an impression from the paint of another pot which was placed near or against this one in the kiln. This became an example of the mass production that occurred in Iron Age II. The paint smudged off, leaving a "shadow" mark.

Fig. 4.1-11b. The type of decoration on this amphoriskos is known as Black on Red Ware. This ware, as mentioned above, is usually associated with Phoenicia, however it was more widely produced on Cyprus. It contains small sets of concentric circles. The vessel has a shiny surface, as it was burnished after it was fired.

Fig. 4.1-11c. This amphoroid krater has an interesting decoration in terms of form. Underneath the wavy band, dots, and straight bands, there appears to be another decoration. It is possible that the vessel was supposed to have been Bichrome Red with red, black, and white decorations, which misfired and burned and to sell it the potter then decorated it to sell it.

Fig. 4.1-11d. This small amphoroid krater is an example of White Painted Ware, with the typical diamond and

net patterns and series of bands. The pot shows evidence of collapsing before or during firing as the rim is uneven. The painted decoration on the base and pedestal date it to the early Iron Age (about 950 BCE).

Fig. 4.1-11e. This Bichrome jug is decorated with red and black paint designs over a light base coat (slip). The jug was originally made in Phoenicia and was brought to Cyprus where it was reproduced and popular. It is barreled shaped and it contains the circular decoration that was done with a single brush which probably was applied while spinning the pot on the wheel.

4.2.13.3 Imported Cypriot and Cypro-Phoenician Wares.

The term "Cypro-Phoenician" pottery was developed in Palestinian archaeology and is not used in Cyprus. Various forms of Cypriot pottery have been found in excavations in Israel and it appears that it was imported into Israel and Judah and not reproduced by local potters. Examples of these wares were found at Megiddo, Far'ah (S), Abu Hawam, Jemmeh, Carmel, and Lachish (Amiran 1969:288-290).

4.2.14 Ammonite Pottery

Ammonite pottery has distinguishing elements associated with ceramic types of Judah, Israel, Phoenicia and Assyria. The pottery, however, maintained certain unique characteristics related to the Ammonites. The analysis of this pottery came primarily from seven tombs excavated in Amman and vicinity which were dated to the Iron II C period due to the forms of the pottery.

Some of the pottery included: Bowls that were Judean type, Assyrian and a few bowls of Samaria Ware. They were decorated with the Ammonite pattern, a band made up of stepped red painted triangles. Chalices resembled the ones from northern Israel. The jug forms were like those from Israel and Judah. They were decorated with black on a burnished red background. Decanters were Judean in style, especially around the rims. Juglets were typical of Iron II C juglets that were found in Israel and Judah. Jars and amphoriskoi were more like those found in the South (Judah) and some were Phoenician in style. Cooking pots were the dominant type in Israel and Judah. Bottles resembled Assyrian imports and some were Bottle-Amphoriskos which were zoomorphic in character. Most of these had a trough-like spout, resembling the jug spouts.

4.2.15 Egyptian Pottery

Through each archaeological time-period, there has been very little Egyptian pottery discovered in ancient Canaan/Israel & Judah and this was particularly true of the Iron Age. What was the reason? The first inclination is to consider the tense political relations between these countries. However, Israel & Judah had strained political relationships at various times with all countries and regions around them, yet the appearance of pottery from these as has been discussed, was found throughout the land.

The reason then for the scarcity of Egyptian imported wares in Israel/Judah especially during the Iron Age is found by looking at the international market and the quality of the pottery. During the Iron II period, Egyptian exports on the international market did not

include goods which were transported in large pottery containers, such as oil, wine, and grains. Egyptian craftsmen, then as always, preferred using costlier materials instead of pottery. They reached a high artistic level in the manufacture of objects for daily use. These could include decorative boxes, stone goblets, faience and alabaster vases. Excavations at places such as Megiddo and Lachish uncovered some of these items.

4.2.16 Assyrian Ware

Assyrian pottery was distinctively different from local ware. Petrie was the first to recognize bowls as Assyrian, during his excavations at Tell Jemmeh (Gerar). Since then, such pottery has been found at Samaria, Tell el-Far'ah (N) and Hazor. In all excavations, it appears in strata of the period following the Assyrian conquest of Samaria, after 721 BCE. Commercial relations between Israel-Judah and Assyria were the consequences of Assyrian rule over the Northern Kingdom. It is also important to note that pottery from Iron II B-C was also found in Nimrud (Kalhu) in the 7th century BCE (Amiran 1969:291). Examples of Assyrian ware were especially noted at Samaria, Jemmeh, Hazor, and Far'ah (N) (Amiran 1969:292).

4.2.17 Concluding Comments on Pottery

Pottery items are some of the most enduring kind of material to survive from ancient times. The typological study of pottery from Iron Age II has played an important role in presenting a continuous dating witness which is "non-textual." It provided a source that brought understanding to several major factors that related to the economic, religious, political and cultural aspects of the lives of the people as presented in the Hebrew text. More

precisely it gave a method to determine important points such as: the dating of the destruction of cities in relationship to attackers like the Assyrians; knowledge of the type of vessels used in religious rituals and burials; the status of people (rich and poor); the cultural identification of other people who occupied the lands of Israel and Judah; the identification of the trading that occurred between Israel and Judah and other lands; the similarities and differences between the Israelites and Judahites in relationship to their locations and most important it provided the ability to determine occupation levels of the time period when sites were occupied. Without the knowledge of ceramic typology, the ability to elucidate the history of this time period presented in this dissertation would have been confusing, unreliable and vague. One of the main factors used by archaeologists in giving their reports on the sites is their analysis of the ceramic finds. Its importance cannot be stressed enough.

There were a number of places in the Hebrew Text where the pottery was used as a symbol to illustrate to Israel important lessons related to historic events that would change their lives. One of these was through the prophet Isaiah at a time in Israel's history when many of the people did not believe that God would punish them as a nation for its sins, iniquities and transgressions. To illustrate God's warning to Israel at that time, Isaiah spoke the following words as recorded in Isaiah 41:25b, "And he will come upon rulers as upon mortar, Even as the potter treads clay."



Fig.4.1-1a Potter's Wheel



Fig. 4.1-1b Iron Age II Pottery

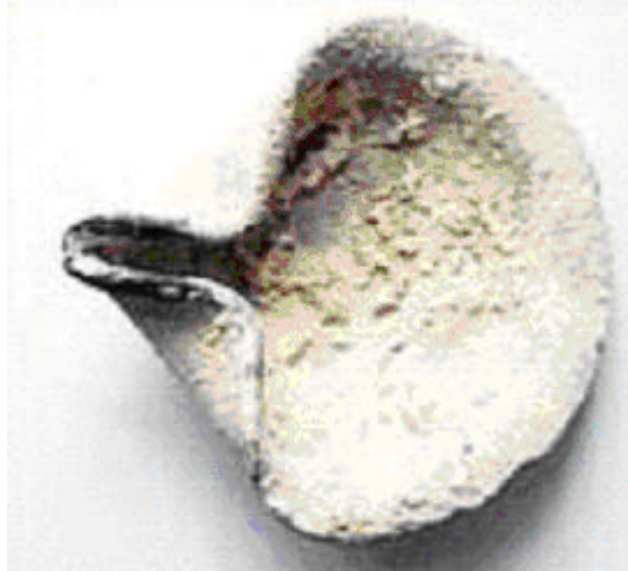


Fig. 4.1-2a Iron Age II North (1000-721 BCE)

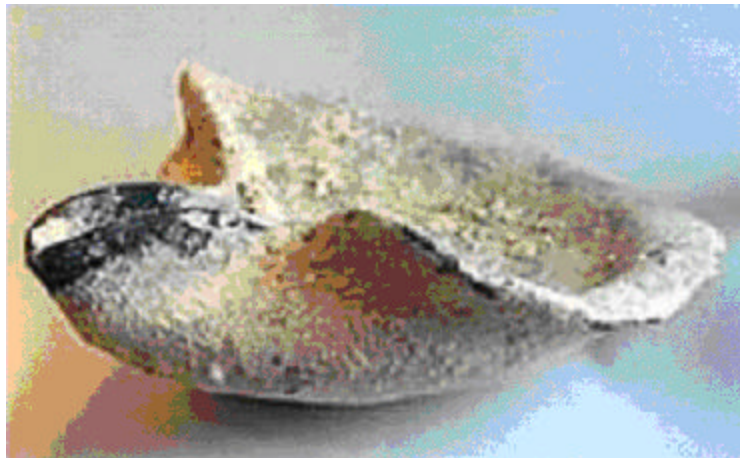


Fig. 4.1-2b Iron Age II North (1000-721 BCE)

These lamps featured a pinched spout, flared rim and a low flat base.



Fig. 4.1-3a Iron II South (1000-587 BCE)

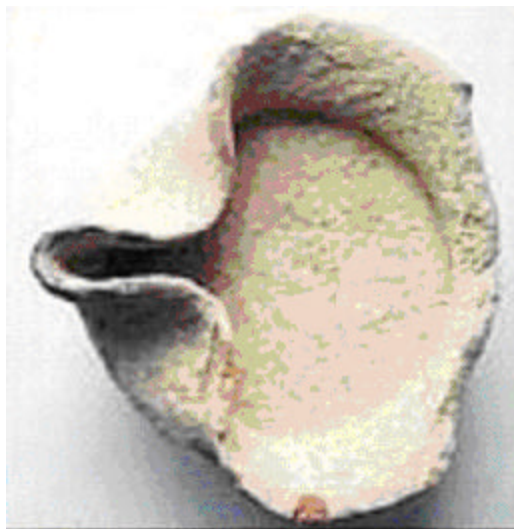


Fig.4.1-3b Iron II South 1000-587 BCE)

This lamp style incorporated a thick base or pedestal and was developed and used exclusively in southern Israel during the Divided Kingdom. The example in the picture is filled with solid sediment that may have accumulated from water dripping from the roof of the tomb for more than 1000 years?



Fig. 4.1-4a Iron II

Round, deep bowl with burnishing from Sa'idiyeh V

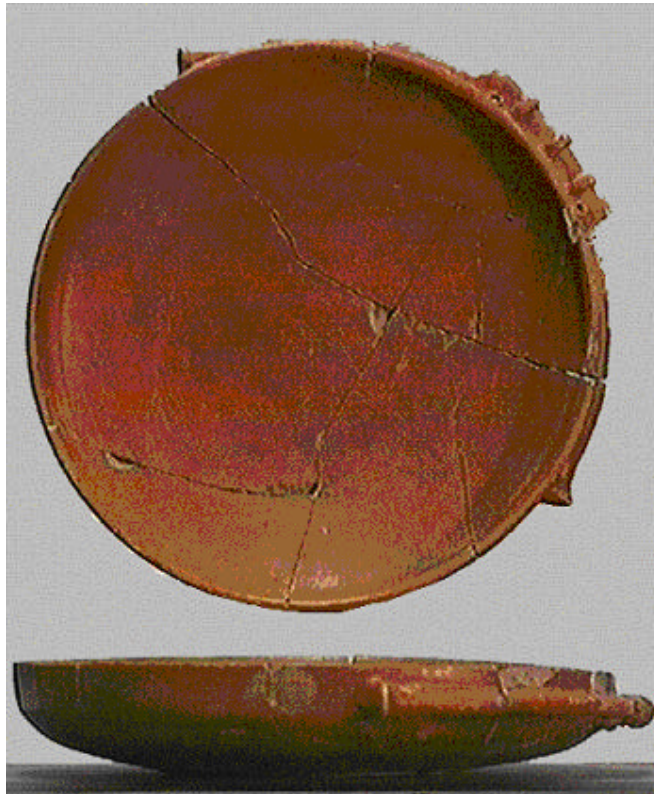


Fig. 4.1-4b Iron II Samaria Bowl with thick walls and wheel burnishing
of deep red slip from Beth-Shean IV



Figure 4.1-5a

Iron I Large bell-shaped krater with spiral design
Beth Shemesh Stratum III



Figure 4.1-5 b

Iron I Fragment of large bell-shaped krater
with spiral design
Beth Shemesh Stratum III



Fig. 4.1-6a Iron II Cooking Pot Beth-Shemesh Stratum II



Fig. 4.1-6 b Iron II Pottery from Beth Shemesh



Figure 4.1-7 Iron II Collection of Juglets



Figure 4.1-8a Iron II Black Juglet from Sa'idiyeh V



Fig. 4.1-8a Iron II Dipper Juglet from Beth-Shean



Fig. 4.1-9 a Iron II Black on Red juglet from Beth-Shean



Figure: 4.1-9b Iron II Phoenician Red-slip juglet from Beth-Shean



Figure 4.1-10a Iron I Philistine Pottery, Beth Shemesh, stratum III



Fig. 4.1-10b Iron Age I Philistine Pottery, Beer-mug, Beth Shemesh stratum III



Fig. 4.1-10c Iron I Philistine
Horn-shaped Pyxis with red line design Beth Shemesh Stratum III



a.



b.

Figure 4.1-11
Cypriot Pottery
Iron Age

a. Jug: "Free-field" Style

b. Amphora
Black on Red Ware

c. Amphoroid Krater

d. Amphoroid Krater

e. Bichrome Jug



c.



d.



e.

4.3 City Planning

4.3.1 Introduction To City Planning

The main factors of the Iron Age Israelite towns are: the fortification system; the city gate; a piazza near the gate; the street network; public structures of various types (palaces, store buildings, cult places); royal stables; drainage and water supply systems; dwellings; and various industrial installations.

4.3.2 Categorization of Cities

Israelite cities can be divided into several categories: capitals of the kingdoms, district administration centers, and country towns.

The capitals of Judah and Israel (Jerusalem and Samaria) as well as those of neighboring city-states in Philistia (Ekron and Ashdod) were very large. They comprised several dozen or even hundreds of acres in area and their populations must have surpassed ten thousand. They included massive fortifications, a royal acropolis, buildings, markets, and residential quarters.

The second category included cities which served as regional administrative and military centers. These cities included Hazor, Megiddo, Lachish, and Beersheba. Most of them averaged 20 acres (except Beersheba, which was much smaller) and their population numbered approximately two thousand to three thousand. Significant areas of these cities were set apart for public edifices such as palaces, administration buildings, storehouses, and stables. These were usually separated from the rest of the town by walls and gates such as those found at Hazor, Megiddo and Lachish. See Figure 4.3-1. Other cities also had specific

public buildings, such as the large religious center at Dan.

The third category was composed of country towns, which were usually not more than 5-7 acres; their population can be estimated as having been about five hundred to a thousand. They were fortified, and they contained mainly dwelling quarters (Mazar 1990:463-465).

4.3.3 Orthogonal and Peripheral City Planning

Orthogonal City planning is known only at Tell el-Far'ah (N). Streets and houses were constructed in well-defined units based on streets intersecting at right angles. In Judah, "peripheral" planning has been traced at several towns such as at Tel Beersheba, Tell Beit Mirsim, Tell en-Nasbeh, and Beth-Shemesh. In this town plan, a tract of houses were built along the circumference of the town and along the city wall. A circular street separated the outer tract from the center of the city, which included dwellings and other buildings arranged along radial streets and lanes (Mazar 1990:462).

4.3.4 Fortifications of City

Many of the fortification lines built in the Bronze Age continued into the Iron Age especially at sites in the lowlands. In the Philistine plain, several cities, including Ashdod and Ekron, were surrounded by newly constructed solid brick walls. In the hill country, which was sparsely populated in the Bronze Age, most newly established villages (Ai, Bethel, Tell Beit Mirsim, Arad, Tell Malhata, and Tell Masos) were unfortified throughout Iron I. Some sites, however, do have houses built around

the perimeter, thus creating a flimsy form of protection (Mazar 1990:465-467).

Probably the most famous of such forts was Tell el-Ful (possibly ancient Gibeah). It was excavated by W.F. Albright and was also the royal residence of Saul (1 Sam. 11:4; 15:34; 22:6; 23:19). Another interesting fort was found in Arad. It showed continuous occupation and modification in design throughout Iron II. See Figure 4.3-2. Some of the cities like Gath, had moats around them for extra fortification. See Figure 4.3-2.

4.3.5 Walls: Casemate and Solid

Casemate is a military term designating a chamber in a fort. The word is derived from the Greek chasma (chasm or hollow). Casemate fortification was introduced in the Middle Bronze period, and developed principally under the Hittite Empire in the Late Bronze period (fourteenth and thirteenth centuries).

A very good example of this Late Bronze fortification was seen at Hattusas Boghazkoy, capital of the Hittites in Anatolia (Turkey). This site had a citadel, upper and lower city complexes, all with walls, and provides a classic casemate design. Rectangular bastions or towers were built at frequent intervals on the outer surface of the walls (Blaiklock and Harrison 1983: 121).

The casemate wall construction comprises two parallel walls, built with an average space between them of 1.5 to 2.1 m (5 to 7 feet). The outer wall was the thickest (average 1.5 m or 5 feet) and the inner wall somewhat thinner (average 1.1 m or 3 1/2 ft). The two walls were joined at intervals by cross walls, creating in effect a kind of series of rigid box-like chambers or "casemates."

The thinner walls had doorways into the city. In peace time, the rooms or chambers were used for storage or as family residences. In times when there was threat of enemy attack, the most vulnerable casemates were packed with rubble. This made the outer wall more difficult to breach. Its design provided strength with the least expenditure of labor and material. Casemate walls continued to be used through late Iron II.

Some examples of the casemate walls in Israel can be seen at: Tell en-Nasbeh (Mizpah); Tell Beit Mirsim (Debir); Beth Shemesh; Gezer; Hazor; Megiddo; Tell Qasile; and a number of isolated citadels in the Negev. The distinctive casemate system used by the Hebrews was fundamentally different from the single massive Canaanite structures of rough stones. See Figure 4.3-3.

Casemate walls became very rare after the tenth century BCE. They were used in royal enclosures such as those found at Samaria and Ramat Rahel. Fortresses at Kadesh-Barnea and Tell el Kheleifeh (Ezion-Geber) used casemate walls. At Tel Beersheba and Tell el-Ful they were built as the town's fortification. In the case of Tell Beit Mirsim, the tenth-century casemate wall was employed until the town's final destruction. At several Judean cities the casemates served also as the inner broad rooms of houses attached to the wall. These were found at Tell Beit Mirsim, Beersheba Strata III-II and the earlier stage at Tell en Nasbeh (Blauklock and Harrison 1983:121).

Solid walls became a prevalent type of city wall in the ninth century BCE onward. They were found in almost all the cities excavated in the northern kingdom: Hazor; Dan; Tel Kinrot; Megiddo; Yoqneam; Tell el-Far'ah (north); Gezer; and Khirbet Marjamah. Solid walls were also found

in many Judean cities: Lachish; Tell en-Nasbeh; Ramat Rahel; Timnah; Khirbet Rabud [Debir]; Beersheba [Strata V-VI]; Tel Ira (Aroer); Arad; Kadesh-Barnea earlier phase; and Tell el-Kheleifeh later phase. Such solid city walls are also found at those independent city-states of Philistia which were excavated (Ekron and Ashdod).

The walls had a solid stone or brick superstructure on a stone foundation; their width averaged between 2 and 7 m. The details of construction and planning varied. The walls were sometimes strengthened with outside "saw teeth" offsets or were constructed with "offsets and insets" (as at Megiddo). A unique double wall was found at Yoqneam. Solid rectangular or slightly rounded towers defended weak points in the cities defense system.

The upper part of the walls can be reconstructed from Assyrian reliefs which show protruding balconies that enabled enfilade and vertical fire on the attackers. The city wall was usually constructed on the upper slope of the mound. In several cases (Lachish, Timnah, and Tel Halif) an outer retaining wall was constructed farther down the slope, creating a double defense line and serving as an additional obstacle for siege equipment and troops (Mazar 1990:469).

The steep inclination of mounds susceptible to erosion endangered the foundations of the walls. The problem was overcome at several Judean sites by the construction of earth glacis resembling those of the Middle Bronze Age. Such earthworks are known from Tel Beersheba, Tel Malhata, and Tel Halif in the southern part of the country, from Ashdod-Yam (on the coastline west of Ashdod), and possibly also from Timnah.

Y. Yadin suggested that the shift from casemate to solid walls was the answer to the Assyrian battering ram and other siege techniques, which appeared in the region from the mid-ninth century BCE. This provided greater resistance to attacks by siege machines. Thus, the 7 meter wide solid stone wall of Jerusalem was perhaps the main obstacle in the path of Sennacherib's battering rams. However, even the solid walls failed to fend off the Assyrian siege machines. The 6 meter wide city wall at Lachish is just one example of a wall breached by the Assyrians.

There are few exceptions to the typological development of city walls suggested by Yadin. Among these exceptions are the few appearances of solid walls during the tenth century (such as Tel Kinrot) and a casemate wall at Beersheba in the ninth and eighth centuries BCE (Mazar 1990:467).

4.3.6 Gate Complexes

The gate complex is one of the most imposing features of Israelite cities. It was usually planned as a combined system creating an indirect approach to the city. Leading up to the outer gate was a ramp built approximately parallel to the outer wall and was supported by a retaining wall. Entry was made between the outer gate located on the lower part of the slope of the mound and an inner gate situated a little further up slope on the mound. Such gate complexes are known at Dan, Megiddo, Tirzah, Gezer, Timnah, Lachish, and Beersheba. See Figures 4.3-4.

During the Solomonic era and shortly after, the six-chamber inner gates (with or without an outer gate) were common. These were found at Gezer, Hazor, Megiddo, Lachish,

and Ashdod. Later examples of the six-chamber gates were found at Tel Batash (Timnah) Stratum III of the eighth century BCE and at Tel Ira in the seventh century BCE. Four-chamber gates started to appear in the early tenth century outside Israel (at Ashdod) and at the beginning of the ninth century BCE at Tel Beersheba. They became the most common gate type, appearing at: Megiddo Stratum IVA; Dan (where two gates of this type were found); Dor; Timnah Stratum II; Tel Beersheba; and Tell el-Kheleifeh. Such four-chamber gates were also the most common form in northern Syria during these centuries. It appears that the simpler versions were more common in the later part of the Iron Age. These gates had only one guard chamber. Several of the gates were defended by enormous solid towers. Examples of these were found at Lachish, Tell en-Nasbeh, and Timnah (Mazar 1990:469). In addition to their defensive function, in peace time the gates also played an important role in the daily life of the city: as a market (2 Kings 7:1); a place of judgment by the elders (Deuteronomy 21:19, 22:15; Amos 5:12); and a general assembly area where rulers made appearances and prophets spoke (1 Kings 22:10; Isaiah 29:21; Amos 5:10; Jeremiah 39:7; 2 Chronicles 32:6).

Cult practices were also carried out at the city gates. At Dan, an ashlar installation had a canopy supported on four stone column bases; the bases were ornamented in a style that was like Neo-Hittite architecture in north Syria (Biran 1993:329). This installation could have been a focal point for cult practices.

The civil activities could take place on a piazza just inside the city gate or in a small piazza between the outer

and inner gates. Other activities, such as trading could have taken place inside the guard chambers in the gate. This is suggested because of the benches and water troughs found in some chambers.

The main use of the 6 and 4 chamber gates were for defense against military conquest. When viewed from outside the city, the external entry ramps were most often to the left of the gate. Enemy soldiers coming up the ramp would see the city wall to their left. Apparently in ancient times, most soldiers were right handed. Their weapons would be in their right hands and not easily usable against soldiers on the wall to their left. If the attackers stopped their advance up the ramp in order to face the enemy on the wall, they themselves were more vulnerable. At the top of the ramp, a 90-degree turn to the left would be necessary in order to face the outer gate. A rapid assault with a battering ram would not be possible because of the necessity to stop at the top of the ramp and to turn left in front of the gate. Both the outer and inner gates of the city would be closed tightly with heavy wooden doors. The inner chambers could be occupied by defending soldiers. At some sites, there is some evidence that additional defensive doors were put between some of the chambers. Soldiers would be on top of the city walls, on the gates, and especially on top of the massive stone dividers (the "teeth") which separated the chambers. If attackers gained entrance through the outside gate, soldiers on top of the dividers could certainly kill attackers who were trapped in the central passage way and the chambers below. All of these factors combined to make such ancient city gates very effective.

4.3.7 Water Supply Projects

4.3.7.1 Introduction:

The water supply projects in Israelite cities are one of the most impressive achievements of the period. They are evidence of great skill in engineering and practical hydrogeology as well as of astute ability in organizing large labor gangs for public works. Such projects have been found throughout the country: at Hazor, Megiddo, Yoqneam, Yible'am (Ibleam), Tell es-Sa'idiyeh, Gezer, Gibeon, Jerusalem, Beersheba, Arad, and Kadesh-Barnea.

The water projects varied according to the principles of their planner. The details of planning at the sites were highly dependant on the local conditions.

4.3.7.2 Gibeon Water System

The first system at Gibeon included a feeder tunnel that was cut from the spring into the subterranean water-bearing stratum (the aquifer) to increase the water flow. This is the only known Iron Age example of such a feeder tunnel, which became well known in the Judean Hills in later periods.

The second water system at Gibeon starts with a great circular shaft, 11.3 m in diameter, cut into the bedrock with spiral steps. At a depth of 10.8 m, it ends in a spiral-stepped tunnel descending a further 13.6 m to the subterranean water level. This system was probably constructed later than the nearby stepped tunnel, which led directly to the spring. See Figure 4.3-6.

4.3.7.3 Hazor Water System

The total depth of this system is 40 m. It consists of: an entrance structure with descending ramps, a vertical square shaft, approximately 13 x 16 m in size, which is 19 m deep, with a wide, sloping stepped tunnel, 25 m long and 11 m deep, ending in an underground water room. The spiral steps hewn into the sides of the shaft were wide and shallow to enable descent by pack animals. The Hazor system, dated to the ninth century BCE was probably the work of King Ahab, who carried out the extensive rebuilding of this city.

4.3.7.4 Gezer and Beersheba Water Systems

The Gezer water project probably followed a principle similar to that at Hazor and Gibeon. The sloping tunnel here was some 41 m long and was approached from a 7 m deep shaft. The system terminated in an enormous, 38 m long underground cavity, but the bottom of the latter was not reached by the excavator. It is thought that it was an underground vertical shaft leading to the water level. The water project at Tel Beersheba was probably also planned according to the same idea. A large, square shaft with wide spiral steps was hewn at the corner of the town in order to reach the water level 25 m below, near the Beersheba Brook.

4.3.7.5 Jerusalem Water System

4.3.7.5.1 Gihon Spring and Introduction to The Water System in Jerusalem.

The Gihon Spring is a year round supply of water apparently named after the river that is mentioned in Genesis 2:13. The spring is in the Kidron Valley near the bottom east side of the slope of the City of David in Jerusalem.

An early water project related to this was the Siloam Canal and Hezekiah's Tunnel. The first is an aqueduct canal along the outside slope of the City of David, conducting water from the Gihon Spring into a large reservoir at the lowest part of the Tyropoeon Valley. Openings in the canal allowed irrigation of fields along the Kidron. The canal may be identified with the "Shiloah" mentioned by Isaiah during the reign of King Ahaz (Isaiah 8:6). Hezekiah's Tunnel led all the water of the Gihon spring through an underground tunnel to the Tyropoeon, on the other side of the hill of the City of David. At this time the Tyropoeon was already included inside the fortified city. The tunnel is referred to in the biblical narrative as one of Hezekiah's major achievements. It is said to have brought water into the city, namely into the newly fortified area, west of the City of David (2 Kings 20:20; 2 Chronicles 32:3-4). The tunnel was discovered by E. Robinson in 1838 and later explored by Charles Warren in 1867 and Pere H. Vincent. See Figure 4.3-7

4.3.7.5.2 Warren's Shaft

"Warren's Shaft" was named after Charles Warren, the prominent nineteenth-century explorer of Jerusalem, who discovered the shaft in 1867. It is similar to the Megiddo

system which is discussed in this dissertation in Chapter 5 under "Megiddo".

In Jerusalem, the ancient engineers made use of a vertical fissure in the bedrock. They reached the top of this natural shaft by hewing into the steep slope of the hill and digging a steep bending underground passage from inside the city wall. A lower short horizontal tunnel led the water of the Gihon fountain to the bottom of the vertical shaft.

Water could then be raised in containers by ropes, as at Megiddo. Warren's Shaft is dated to before the time of Hezekiah, who made use of the lower horizontal gallery to begin his own long horizontal tunnel. Additional information on Warren's Shaft is discussed in this dissertation in Chapter 5 under "Jerusalem". See Figure 4.3-8.

4.3.7.5.3 Hezekiah's Tunnel

This tunnel is 1,750 feet (one third of a mile) through the bedrock beneath Ophel Hill. It is 2 to 3 feet wide and varies in height from 16 feet at the south end to 4 feet 6 inches at the lowest point, near the middle. The tunnel differs from the other known water systems in ancient Palestine, all of which were cut to allow people to descend from the higher ground of their city to the water source at a lower level. This tunnel slopes downward slightly away from the water source to allow water from the Gihon Springs to flow through it to a pool at a lower level at the southern end of the hill. The pool was inside the city wall when the tunnel was dug. Such a tunnel made

engineering sense in Jerusalem because of the ancient city's unique topography.

This tunnel is undoubtedly the project described by the Biblical historian as part of Hezekiah's preparations against an Assyrian siege. In 701 BCE,

Sennacherib king of Assyria came and invaded and encamped against the fortified cities, thinking to win them for himself. And when Hezekiah saw that Sennacherib had come and intended to fight against Jerusalem, he planned with his officers and his mighty men to stop the water of the springs that were outside the city...This same Hezekiah closed the upper outlet of the waters of Gihon and directed them down to the west side of the city of David.

(2 Chronicles 32:1-3, 30; cf. also 11 Kings 20:20). See Figure 4.3-9.

Hezekiah's Tunnel: Place of the Joining

It is clear from the direction of pick marks on the walls of Hezekiah's Tunnel that the conduit was cut by two teams working towards each other from the spring end and the pool end. Their task was complicated by the fact that neither segment was cut in a straight line. It is interesting to note that if these teams had not changed their cutting directions sharply to the left as they came parallel, they would have passed each other without meeting. But they did change their directions several times as they groped their way through the last 100 feet of bedrock that separated them, guided by the sound of the other team's pick blows. See Figure 4.3-10.

There was an inscription found in 1880 carved in the east wall of Hezekiah's tunnel about 20 feet from its end at the Siloam Pool. It vividly describes the drama of the

last moments before the two cutting teams met deep within the hill beneath their city:

and this is the story of the piercing through. While [the stone-cutters were swinging their] axes, each towards his fellow, and while there were yet three cubits to be pierced through, [there was heard] the voice of a man calling to his fellow, for there was a crevice on the right...and on the day of the piercing through, the stone cutters struck through each to meet his fellow, axe against axe. Then ran the water from the spring to the pool for twelve hundred cubits, and a hundred cubits was the height of the rock above the head of the stone-cutters.

This inscription has provided an important specimen of Hebrew script datable to the end of the 8th century BCE, because the tunnel-cutting operation can be dated almost certainly to shortly before Sennacherib's invasion of 701 BCE.

After the inscription was discovered, it was cut away from the tunnel wall. Eventually it was acquired by the Ottoman government then controlling Palestine and was placed in the Istanbul Archaeological Museum, where it still resides (Shiloh 1993a:710-712). See Figure 4.3-10.

4.3.7.6 Megiddo Water System

There are two springs adjacent to Megiddo: the northern spring, "Ain el-Qubi and the spring at the southwestern corner of the mound, to which the city's water system was connected. The investigation of another water installation adjacent to the city gate in the north began in 1967 (Yadin 1978:854). The 1960-1967 excavations also clarified the problematic chronology of the city's water

system. The two main elements in question were gallery (629) and the subterranean water system.

On the southwest side of the mound, the American expedition uncovered a curious structure which they called gallery (629). This gallery was a narrow passageway, slightly more than 1 meter wide, leading down the southwest slope of the mound to a spring flowing from a cave at the foot of the mound. The walls of the passageway were built of ashlar laid in courses of headers and stretchers. The American excavators correctly assumed that this passage was part of the city's water system. Stratigraphically the passageway lay beneath the offset-inset wall (325), which the American excavators attributed to Solomon. Therefore, they assumed that the gallery was built before Solomon. They could not, however, attribute this imposing structure to the levels immediately beneath the offset-inset wall, because of the poor quality of the building remains. The excavators thus assigned the gallery to stratum VII-A, the time of Ramses III (1184-1153 BCE).

The subterranean water system consists of a vertical shaft (925) and a nearly horizontal tunnel (1000) cut underground. The upper section of the shaft was dug through the debris of previous settlements and was faced with a stone wall. The lower section of the shaft was cut into bedrock. The tunnel was cut from the bottom of the shaft, through bedrock to the cave containing the spring at the foot of the mound, the same spring to which the gallery descended from the outside. This huge engineering achievement served to convey water from the spring through the tunnel to the shaft inside the city wall. Thus in times of siege the inhabitants could safely draw water from inside the city. As a finishing touch to this great

project, a stone wall was built to block the mouth of the cave. The water supply was thus accessible only from within the city, and a besieging enemy was prevented from poisoning or otherwise contaminating it.

On the basis of the early dating of the gallery, the dates of the later strata through which the upper part of the shaft was dug, and some ceramic remains within the cave (the latest of which were sherds ascribed to stratum VII-A), the American excavators reached the conclusion that the shaft could not have been dug before the thirteenth century BCE. After finally dating the construction of the shaft and tunnel to the twelfth century, the excavators then ascribed the gallery to a period prior to the completion of the subterranean system. This was based on the assumption that the gallery was rendered obsolete once the tunnel began functioning.

The 1960 excavation however showed that the offset-inset wall (325) clearly dates to post-Solomonic times and that the gallery could be attributed to the Solomonic period. A sounding made during the 1966 excavation revealed:

1. The foundation trench of the gallery, which was dug into the debris of previous strata, cut through houses of strata VI-A and V-B.

2. One of the stones of the gallery bore a mason's mark identical with those of the Solomonic buildings. The gallery can therefore be dated prior to the construction of the offset-inset wall but following stratum VI-A and V-B, to Solomonic times V-A and IV-B.

The construction of the subterranean system can be dated approximately to the period of the Israelite Monarchy. It is definitely post-Solomonic, but probably no

later than the Omrid Dynasty (stratum IV-A, the stables and the offset-inset wall). The subsequent discovery of a similar water system of Hazor from the time of Ahab is further support for this conclusion. Stratum IV-A was thus built during the period of Omrid rule, the second quarter of the ninth century BCE (Shiloh 1993b:1021).

Summary: The stages of the northern water system of Megiddo as compiled by the investigators of the expeditions were as follows:

- (1) The spring was located beyond the fortified area and served as a source of water at the base of the mound.
- (2) The earliest water system, Gallery 629, was constructed by fine ashlar masonry and was integrated into the city fortifications of Strata VA-IVB. From its passage through the defenses, it continued along a stairway to the spring. This system was unsatisfactory for securing the water source in time of war.
- (3) The major change in the planning of the water system of Megiddo came about in Stratum IVA. In this stratum, Gallery (629) was blocked by the construction of a inset-and-offset wall (325), which was built above and inside it. At the same time a square shaft was cut through the rock in the city's fortified area: steps descend along its sides to a stepped tunnel that gradually developed into a horizontal tunnel, approximately 80 meters long. This tunnel goes on to reach the spring, which flows some 35 meters below the surface of the mount. The original entrance to the spring from

the outside was blocked by a thick wall. Some changes were made in the water system in strata IVA-III, but it continued to function throughout the Iron Age.

- (4) At this stage the water system was further improved: the level of the tunnel at the end was lowered and the stepped section was removed up to the base of the shaft. Now the water could flow freely from the spring inward to the very base of the shaft where it could be drawn up directly by the inhabitants rather than having to be hauled up through the long tunnel, as in stage 3.
- (5) This phase reverted to the original method of stage 3. Steps were built down to the base of the shaft on a new fill.
- (6) It can be assumed that the water system served the royal Israelite center at Megiddo up to the destruction of the Northern Kingdom by the Assyrians in the eighth century B.C.

The Water System and the City Plan: Gallery 629 was well integrated into the new town plan of Strata VA-IVB. It was integrated into the casemate wall like the other public structures built in the peripheral belt of the mound, Palaces 6000 and 1729 and Gate 2156, were made of ashlar construction (Shiloh 1993b: 1022-1023).

The principal water system of Megiddo is one of the new components in the overall planning of Megiddo in Stratum IVA. Its construction necessitated the confiscation of considerable private dwelling areas for public use, as did construction of the northern and southern stables (Shiloh 1993b:1023). See Figure 4.3-11.

4.3.8 Industrial Structures

Excavators have identified a number of other types of structures as evidence of industrial activities: iron smelting and processing (Arad and Ezion Geber); dye and tanning (Tell Beit Mirsim); oil pressing (Ekron and Timnah); viticulture (Gibeon); weaving (Tell es-Sa'idiyeh) and pottery manufacture (Sarepta in Phoenicia). Some of these activities appear to be local cottage industries (Tell es-Sa'idiyeh), although others seem to be truly industrial parks (Sarepta's kilns and Gibeon's winery).

4.3.9 Wells and Cisterns

In addition to the one at Arad, deep stone-lined wells are known also from Lachish and Tel Beersheba. The well at the latter is located on the eastern slope of the mound, where remains of Iron Age I houses were revealed. Influenced by B. Mazar's theory concerning the possible Iron Age I background of the patriarchal stories, Y. Aharoni suggested identifying this well with that mentioned in the patriarchal narratives (Genesis 21:22-33). However, the date of the well cannot be clearly determined.

4.3.10 Concluding Comments on City Planning

The planning and construction of the infrastructure of a city were usually designed by the ruler of the city. Information in the Hebrew Scriptures and other texts, such as from Assyria and Egypt, mentioned many population centers in Israel and Judah. Historical texts indicate that several important military events took place in and around cities.

The excavations of cities have provided us with one of the key sources illuminating the history of the Iron II period. From the various texts it is hard to accurately categorize some population centers as capitol cities, trading centers or towns. However, systematic excavation and careful studies of dozens of sites have provided us with much detailed information.

Population centers in Israel and elsewhere can be divided into various categories: capitals of kingdoms, district administration centers and country towns.

Very important features of the cities from this time period were the city walls. Whereas the ancient texts often mentioned the walls, the dimensions and different types of construction were not usually given. Excavations have filled in many details of the extent to which concerned rulers and inhabitants would go to in order to fortify their cities from their enemies. Jeremiah 34:7 indicated that a city with a wall was fortified. Walls varied in type. Some of the walls sloped from bottom to top, with bases up to twenty-six feet in thickness. Some were casemate walls and others were double walls. In Jerusalem, a seven meter wide wall dating from the eighth century BCE was uncovered. This is probably the very wall referred to by Isaiah in his words to King Hezekiah, ". . . You broke down the houses to fortify the wall" (Isaiah 22:10). To increase protection the glacis was developed and the wall was erected on top of the glacis. As techniques of siege warfare advanced, casemate walls had to be replaced by solid walls, normally by filling them with rubble. Systems of salients and recesses were built into the walls, and towers provided for defense. Now after studying the reports

of excavations, we can more easily and accurately picture how King Uzziah in Jerusalem, “. . . placed skillful men who had invented engines of war to be on the towers and on the corners, for the purpose of shooting arrows and great stones” (2 Chronicles 26:15).

Fortified cities which have been excavated include: Hazor, Megiddo, Lachish, and Beersheba. Most of them averaged 20 acres (except Beersheba, which was much smaller) and their population numbered approximately two thousand to three thousand.

City planners and residents realized that the gate of a city not only provided defense, but it played an important role in the daily life of the city. Excavations have revealed the shapes and sizes of various gates.

The gate served as a convenient market area where the maximum number of potential buyers would pass by. It also was a general assembly area where rulers made appearances and prophets spoke. Jeremiah preached about the sanctity of the Sabbath to the king and the people of Jerusalem at the city gates (17:19-27). Amos referred to the gate as a place of judgment by the elders when he stated, “. . . You who distress the righteous and accept bribes, And turn aside the poor in the gate” (5:12). We can now better visualize such activities at the gates.

Because the city gate of Samaria has been found, we can picture the royal event when king Ahab of Israel and king Jehoshaphat of Judah sat nearby in their fine robes at a threshing floor to hear from various prophets (1 Kings 22:10).

Although the various texts give very little information about the actual designs of gates, the excavations from major fortified cities have attested to several types of gates. These include those made with two, four, and six chambers. Solomon is noted as having fortified Hazor, Megiddo and Gezer (1 Kings 9:15). Excavations have uncovered the six chamber style gates which are now considered to be indicative of Solomonic construction.

Significant areas of these cities were set apart for public edifices such as palaces, administration buildings, storehouses and stables. These were usually separated from the rest of the town by inside walls and gates such as those found at Hazor, Megiddo and Lachish. The Scripture related the significance of Ahab's ivory house (1 Kings 22:39). The buildings in Samaria and in Megiddo dated to the time period of this dissertation. The excavators refer to the remarkable layout of the town of Megiddo. Evidence of the planning and prosperity found at Megiddo was shown by the uncovering of a great public grain-storage pit. Its capacity was more than twelve thousand bushels. Megiddo was on a main route used by Egyptian and Assyrian armies.

It is, however, the town of Tirzah that gives what is perhaps the best picture of the times. Here the great gate into the city led at once into a massive structure which was evidently the palace of the local governor. Close to this were two large buildings with fine-stone foundations. The rest of the town had very ragged style buildings which indicated poverty.

Water provisions were a major factor for a city to be developed. It was also necessary if a city was to withstand a siege. In Megiddo and Hazor, huge pits were dug that went down to the water level inside the city. Then a tunnel was built out to the source of the water beyond the city walls. The water system at Hazor dated to the time of Ahab.

In Jerusalem, Hezekiah's Tunnel led the water of the Gihon spring through an underground tunnel into the City of David. This tunnel is undoubtedly the project described by the Biblical historian as part of Hezekiah's preparations against an Assyrian siege (2 Kings 20:20; 2 Chronicles 32:3-4). Cisterns and pools also provided water publicly in towns such as Samaria (1 Kings 22:38).



a. Lachish Approach Ramp: The city was surrounded by two walls including a lower retaining wall. The approach ramp led to the outer gatehouse which in turn led to the inner triple-chambered gatehouse.



b. Lachish Siege Ramp: The only siege ramp excavated in the ancient Near East is this one constructed by the forces of Sennacherib in his 701 BCE invasion of Judah. More than 1000 iron arrowheads were found in the ramp as well as a chain for catching the battering rams. This ramp is depicted in Sennacherib's siege reliefs with five battering rams ascending it.

Figure 4.3-1



a. Arad Border Fortress: In the Iron Age, a major fortress was erected on the summit of the site to protect Israel's southeastern border. While Amalekites and other nomadic peoples could be troublemakers, Judah's chief enemy in this direction was Edom. This fortress was destroyed by the Edomites at least once.



b. City Moat at Gath: Recent excavations uncovered a 1.5 mile long moat that surrounded the city on three sides. This moat dates to the 9th century BCE, and was apparently built by Hazael and his Aramean army when they were besieging the city in 811 BCE. A brief notice of this battle is given in 2 Kings 12:17. The Philistine city of Gath was located near Israelite territory at the end of the Elah Valley.

Figure 4.3-2



a. Aerial photograph of Hazor gate and casemate wall system



b. Casemate Wall System Close View at Hazor Iron II Fortifications

Figure 4.3-3



a. Iron Age Gate: On the northern frontier of the kingdom, Dan was particularly well fortified. This gatehouse was built in the ninth century BCE probably by Ahab, and is part of a series of gateways discovered. In the foreground of this picture is the area of the discovery of the Dan Inscription which mentions the "House of David."



b. Dan Podium for Ruler: This may have been a place for the ruler next to the gate or a place for an idol to be set up. 2 Sam 18:4, "So the king stood beside the gate while all the men marched out in units of hundreds and of thousands." 2 Ki 23:8, "He broke down the shrines at the gates."

Figure 4.3-4



a. Iron II Gate at Megiddo



b. Solomonic Gate at Gezer: This monumental gateway is similar to those at Hazor and Megiddo. The date of this gate is confirmed by the presence of a destruction level underneath it (from the unnamed pharaoh who gave the city to Solomon) and a destruction level not long after its construction (by Shishak in 925 BCE). Biblical history is dramatically confirmed by these archaeological findings.

Figure 4.3-5



a. Steps leading to the pool at Gibeon Iron II



b. Iron Age Reservoir Gibeon

Israeli archaeologists uncovered the largest Iron Age reservoir known in Israel. With a capacity of 7500 cubic feet, this reservoir could have supplied the town's inhabitants with water to survive a three-month siege. This underground storage basin is composed of two long rooms in the shape of a cross and according to the excavators is "one of the finest examples of water engineering and management in the kingdom of Judah."

Figure 4.3-6



a. The Pool Tower was one of two towers built by the Canaanite people living in Jebus/Jerusalem about 1800 BCE. These two massive towers fortified the city's water system and allowed the Jebusites to safely access fresh water in times of siege. The Pool Tower guarded a pool (see below) which received water from a feeder tunnel from the Gihon Spring. Citizens would apparently retrieve water from a platform connected to this tower.



b. Only partially excavated because of a building structure in the way, this pool was a storage basin for water brought from the nearby Gihon

Spring. The Pool Tower, pool, and Spring Tower were all discovered during work in preparation for the construction of a visitor's center.

Figure 4.3-7



a. Warren's Shaft: Discovered by Charles Warren in his investigations of the city in the 1860s, this underground tunnel system has become known as "Warren's Shaft." The system by this name consists of four parts: the stepped tunnel, the horizontal curved tunnel, the 14 meter vertical shaft and the feeding tunnel. Scholars have long debated the date and function of this system. What is clear is that this system was used to access the city's supply of water (the Gihon Spring) from inside the safety of the city walls. Excavations in the 1980s seem to indicate that the system was post-Davidic, but more recent work establishes its Middle Bronze date (c. 1800 BCE).



b. Warren's Shaft: Vertical View

Figure 4.3-8



a. The City of David was very narrow; about 80-100 m wide. The east side has a steep slope of about 60 degrees. Though smaller, steeper and more difficult for construction than the Western Hill, the City of David was chosen because of its water source, the Gihon Spring.



b. Hezekiah's Tunnel A 1750-foot (530m) tunnel carved during the reign of Hezekiah to bring water from one side of the city to the other side. Had it followed a straight line, the length would have been 1070 ft. (335m) or 40% shorter.

2 Kings 20:20 "As for the other events of Hezekiah's reign, all his achievements and how he made the pool and the tunnel by which he brought water into the city..." 2 Chron. 32:30 "It was Hezekiah who blocked the upper outlet of the Gihon spring and channeled the water down to the west side of the City of David."

Figure 4.3-9



a. Discovered in modern times by Edward Robinson (1838), cleared by Montague Parker's team (1909-11), work continues on the Tunnel and related passageways under the direction of Ronny Reich (1995). The tunnel was S-shaped and this photos shows where the workers meet as they dug from each side. R.A. Macalister said the tunnel was a "pathetically helpless piece of engineering." Henry Sulley in 1929 first suggested that Hezekiah's tunnel followed a natural crack in the rock. Dan Gill argues that the two crews of digger followed a natural karsti dissolution channel.



b. The Location of the Siloam Inscription "[...when] (the tunnel) was driven through. And this was the way in which it was cut through: While [...] (were) still [...] axe(s), each man toward his fellow, and while there were still three cubits to be cut through, [there was heard] the voice of a man calling to his fellows, for there was an overlap in the rock on the right [and on the left]. And when the tunnel was driven through, the quarrymen hewed (the rock), each man toward his fellow, axe against axe; and the water flowed from the spring toward the reservoir for 1200 cubits, and the height of the rock above the head(s) of the quarrymen was 100 cubits."

Figure 4.3-10



a. Iron Age Watersystem at Meggido needing secure access to its water supply, Megiddo utilized different watersystems over its history. In the 9th c. BCE, Ahab constructed a massive system with a 30 meter deep shaft and a 70 meter long tunnel. This continued in use until the end of the Iron Age.



b. Megiddo Tunnel: This Iron Age tunnel connected the bottom of Ahab's shaft to the spring. Before its construction, Megiddo residents had to leave the city walls in order to get water from the spring. This tunnel was hewn from both ends at the same time (like Hezekiah's Tunnel) and its builders were only one foot off when meeting in the middle.

Figure 4.3-11

4.4 ARCHITECTURE

4.4.1 Royal Architecture and Ashlar Masonry

The primary royal buildings of the Iron Age were in Jerusalem, Ramat Rahel, Samaria, Megiddo, Hazor, and Lachish. The city of Samaria was about 6.5 acres in area while Lachish was 3.5 acres. Both of these cities were built on artificial fills, the fills were leveled and a high retaining wall was put around them. The great podium at Lachish illustrates the effort taken to raise the city and especially the palace above the surrounding countryside, giving a symbolic emphasis to the strength of the ruler. Lachish is unique in its fortress/residence and this large, monumental structure shows continual rebuilding through most of Iron II (Mazar 1990:471). See Figure 4.4-1.

Spacious, lime-paved courtyards were a common feature in the Israelite royal compounds, providing space for military maneuvers, chariot and cavalry movement, public appearances of the rulers, and other convocations.

Storage space was provided in casemates or elongated storage rooms located at the periphery of these complexes.

The individual structures inside the royal enclosures seem to comprise several contemporary traditions.

(1) "Bit hilani" is an Akkadian term apparently based on the Hittite reference to palaces having a colonnaded entrance porch.

(2) One of the descriptions of Solomon's palace in 1 Kings 7:1-11 is "hall of pillars." In palaces of this type, the porch gave access to the throne room which was a broad hall in which the throne stood at one of the narrow ends. Behind the throne room there were dwelling rooms, sometimes

arranged around an inner courtyard like the "other court" of Solomon's palace.

This feature is paralleled in the pillared halls of the kingdom of Urartu in eastern Anatolia dated to ninth century BCE.

The "four-room" principle, characteristic of many private dwellings of this time, formed the nucleus of the inner planning of royal citadels at Hazor, Shechem and the central building at Tell el-Kheleifeh.

Israelite royal buildings starting in the tenth century BCE until the collapse of the kingdom of Judah were typified by ashlar masonry, Proto-Aeolic capitals, carved windows, and stone cut crenellations on the upper part of the structure's walls.

Three different types of ashlar walls have been identified:

(1) Those comprising ashlar (square-dressed stones) laid in "headers and stretchers," the stones smoothly dressed; this technique was utilized in the facades of buildings and in palace walls which were seen from public courtyards.

(2) The technique was the same as (1). The stones, however were marginally dressed and an unworked boss was left at the center; this technique was utilized in foundation courses and retaining walls.

(3) Walls consisting of ashlar piers separated by a fill of field stones; this technique was utilized in walls of lesser importance such as fences of courtyards and walls of certain dwellings.

Ashlar masonry was used extensively in the main palaces that were located at Samaria, Jerusalem and Ramat Rahel. It was also used in some provincial royal

residencies (example was the tenth century BCE building at Megiddo); the royal ritual centers (such as that at Dan); and to some extent in other official buildings (such as at the gate to the citadel at Hazor). In contrast, however, there were not any ashlar found at the palace of Lachish, this seems to be because of the economic situation (Mazar 1990:472-475). See Figure 4.4-1

Ashlar masonry is also found outside Israel. At Ekron, Ashdod, and Tel Sera in Philistia it was used for strengthening certain parts of mud-brick structures. In Moab, a royal citadel or a palace at the site of Medeibiyeh had a gate built of ashlar and decorated with Proto-Aeolic capitals identical to those of Jerusalem and Ramat Rahel. In Phoenicia ashlar masonry was employed in a few structures and tombs at Sarepta, Tyre, and Achzib. The extensive excavation and good preservation of Israelite sites has made this masonry well known in Israel.

The fact that the earliest examples of this masonry are preserved in the Israelite Solomonic and Omride architecture tempts us to assume that Phoenician artisans and architects were responsible for its introduction to Israel, as these Israelite kings are known to have had close connections with Tyre. The fact that all the examples of ashlar masonry outside Israel are later to the time of Solomon and Ahab, led Y. Shiloh to suggest that it and the related Proto-Aeolic capitals, were original Israelite innovations. Unfortunately, no Phoenician royal architecture is known for comparison. Ashlar masonry was a common Phoenician architectural feature in the late Iron Age; it was also common in the succeeding period in Cyprus, Phoenicia, and in the Phoenician Mediterranean colonies. This could be because more excavations have taken place in

Israel than in the ancient Phoenician sites (Mazar 1990: 474).

The numbers of Proto-Aeolic capitals that have been found are: Megiddo (thirteen examples, including fragmentary ones); Samaria (seven); Hazor (two); Ramat Rahel (ten); Jerusalem (one); and Medeibiyeh in Moab (several). These were comprehensively discussed by Y. Shiloh. He differentiated between those found in the Kingdom of Israel from the tenth and ninth centuries BCE and the group of later capitals (eighth and seventh centuries BCE) of almost identical shape found at Jerusalem, Ramat Rahel, and Medeibiyeh.

The volutes (spiral ornamentation) decorating these capitals are a stylized form of the palmetto, one of the best-known motifs in Canaanite and Phoenician art. Representations of similar patterns also appear on several Iron Age miniature works of art (ivory, stone, and metal).

The stone balustrade (small pillars that support a hand rail) from Ramat Rahel is practically identical to depictions of window balustrade on Phoenician ivories, indicating a clear connection between ashlar masonry and Phoenician formal architecture.

The wide-scale use of ashlar masonry and Proto-Aeolic capitals in Israel and Judah expresses the integration of their regnal dynasties in the general cultural environment of their time. It also illustrates their wealth and efforts to exploit the best available artistic achievements of the time (Mazar 1990:471).

4.4.2 Assyrian Palaces

4.4.2.1 Nimrud

The city of Ancient Kalhu, is known as Nimrud and in the Bible it is referred to as Calah. It is situated south of Nineveh and Mosul on the eastern side of the Tigris River. After over 150 years of excavation and study, this site is one of the best-known Assyrian sites in northern Iraq. Its walls enclose an area of some 360 hectares (890 acres). On the citadel, dating to the period of the Assyrian Empire, are the remains of: four major palaces; three smaller palatial buildings; five temples; three gates; a ziggurat or temple tower of Ninurta (the patron god of the city) and six townhouses. These main royal buildings and palaces cover a space of about 20-hectares (50 acres) (Reade 1986:24-25).

The site was first selected by Ashur-nasir-pal II (883-859 BCE) as it was centrally placed within the Assyrian heartland and it gave him the opportunity to build a new city, to his own specifications. Other Assyrian Kings that had Nimrud as their royal residence were Shalmaneser III (858-824 BCE) and Tiglath-pileser III (745-727 BCE). See Figures 4.4-5 and 4.4-6.

The north-west palace (Ashurnasirpal II) was partially restored by King Sargon II (721-705 BCE). Sargon II however, built a new palace at Khorsabad. See Figures 4.4-7 and 4.4-8. Construction material, roof timbers, floor pavements, and stone reliefs were taken away and reused in the building of King Esarhaddon's palace (680-669 BCE). This palace was located in the S corner of the acropolis.

This salvaging of materials from the original North West Palace is what eventually caused its collapsed and destruction. The excavations have explored only about 40% of the total area; however remains from the Assyrian Kings that ruled there have all been discovered(Reade 1986:6).

4.4.2.2 History of the excavation at Nimrud

Austen Layard discovered the Palace of Ashur-nasir-pal II on the citadel of Nimrud during his stay in Mesopotamia between 1847-1851. Using local workmen, Layard excavated stone bas-reliefs found in the debris of the mud brick walls of the public rooms of the Palace. William Loftus and Boutcher worked at Nimrud from 1854-55 on behalf of the British Museum and the Assyrian Excavation Fund. George Smith worked there in 1874-75 and Hormuzd Rassam from 1878-1881. These excavations did not concentrate on the Northwest Palace. For nearly half-a-century, except for private visits and excavations by Iraqi families nothing more was done with the excavation. Fragments and some antiquities were found and sold to antiquities dealers.

No work by trained archaeologists was done again at Nimrud and the Northwest Palace until 1949, when, a century after Layard, Max Mallowan, on behalf of the British School of Archaeology in Iraq and the British Museum, re-opened the site and paid attention to this monument of Ashur-nasir-pal II's reign (Reade 1986:7).

In summary, after the Second World War, the Iraqis worked alone and with British (Mallowan 1966); Polish (Meuszynski 1976; Sobolewski 1982) and Italian (unpublished) teams. The most recent Iraqi field director is Muzahim Mahmud Hussein. The Iraqis continued to work at

the site, even under severe restrictions, until the Third Gulf War, in 2003.

4.4.2.3 Architecture and design of Ashur-nasir-pal's II (884-859 BCE): Northwest Palace, of Courtyard and Throne Room

Northern Courtyard: The Courtyard of the Palace was through an eastern portal, a visitor would have seen the outer façade of the Throne Room wing to the south. Three entrances were flanked by five sets of human-headed lion and bull sphinxes (called lamassu or aladlammu). See Figure 4.4-9. Three were in the entranceways and two were on projecting buttresses. Two smaller entrances are at each end of the façade wall and one larger entrance is in the center. The sphinx-like creature appear to symbolize the power of the empire. The ones on the eastern set had human hands carrying offerings of an animal and a flowering branch. The human hands of the western sphinx are clasped together in a position with which ancient Mesopotamian tradition denotes a worshipper. These sphinxes then have religious significance.

Two-meter high figures of the king and his courtiers approached by line of supplicants bringing gifts or tribute decorate the western end of the wall on both sides of the small western entrance, the supplicants alone decorate both sides of the small eastern entrance. Gift bearers waited in the courtyard area for an audience with the king in his Throne Room. These reliefs showed those who came to bring tribute to honor the King and his power.

In back of the facing sphinx-like creatures are four-winged, human-headed divinities, wearing horned helmets and

carrying a cone shaped object (mullilu) in their raised hand and a bucket (banduddu) in their lower hand. The four-winged deities are protective: they belong to a family of deities which have been loosely identified by some scholars with the apkallu, the seven ancient sage figures who lived before The Flood (Reade 1986: 6-7 and 24-25). See Figures 4.4-10

Some scholars speculated that the small western entrance may have been the way the throne room was entered when court was in session and the small eastern entrance the exit, while the great central entrance was probably used only for special occasions and for the king himself to enter. (Paley, Samuel, and Sobolewski 1992: 331-35).

Throne Room of Ashur-nasir-pal II

The Throne Room measured about 9.8 X 45.7 meters. All its walls were lined with bas-relief decoration and probably had painted plaster and brick decorating the upper parts of walls. See Figure 4.4-11. The Throne Room was entered from the Northern Courtyard by the western portal. The whole room could be viewed. Both sides were decorated with bas-reliefs. The scenes depicted the king at war, engaged in a lion and bull hunt, and two sets of religious scenes in which the king was with divine servants attending the Assyrian "Sacred Tree". The religious scenes were placed directly behind the throne and almost filled the entire eastern wall; another was directly opposite the main entranceway. The king is portrayed carrying a long staff in his right hand, a symbol in ancient Near Eastern iconography that is associated with the shepherd's staff indicating rulership. It seems to indicate that the King is showing

that he became king because the gods had selected him, this was symbolized by the "Sacred Tree" ceremony. These scenes are higher than the other ones on the walls. The war scenes included the King's victory in Urartu, Carchemish, and other places (Reade 1986:24-29).

4.4.2.4 Nineveh: The Walls and Palaces of the Assyrian Kings at Nineveh.

Nineveh, the capital of ancient Assyria, lies on the left bank of the Tigris River opposite present-day Mosul, Iraq. The remains of the palaces found at Nineveh include: Sargon II (721-705 BCE); Sennacherib (705-681 BCE); Esarhaddon (681-668 BCE) whose palace lies under the hill called Nabi Yûnis; and Ashur-bani-pal (681-626 BCE), his palace is under the mound which is known locally as, Tell al-'Armushiyah. These two great mounds lie close to the remains of the great west wall of Nineveh, which in the time of the last Assyrian Empire was washed by the waters of the river Tigris. At some unknown period the course of the river changed, and it is now more than a mile distant from the city wall. The river Khausur, or Khoser, divides the area of Nineveh into two parts and passing close to the southern end of Kuyunjik empties itself into the Tigris. The ruins of the walls of Nineveh show that the east wall was 16,000 feet long; the north wall 7,000 feet long; the west wall 13,600 feet; and the south wall 3,000 feet. Its circuit was about 13,200 yards or 7 1/2 miles. In the summer of 612 BCE, Nineveh fell to the combined forces of the Medes and Babylonians. Occupation continued, for another one thousand years through the Seleucid and Parthian periods until medieval times (Reade 1986:9).

High Points of the Excavation History: of Nineveh and Khorsabad

Nineveh was first surveyed in 1820; intermittent excavation by various expeditions took place from 1842 to 1931. In 1842, Paul Botta began excavating the Kuyunjik mound without finding what he felt was anything significant. He shifted his work from Nineveh to Khorsabad (Dur Sharrukin) ten miles north in 1843. He found Sargon II's palace almost immediately. Layard excavated at Nineveh in 1849-50 and his work revealed the palace of Sennacherib along with annals of the king. In 1850, Layard and Hormuzd Rassam uncovered the library of Ashurbanipal which contained over 20,000 tablets written in Akkadian and Sumerian. Dr. Victor Place from the Louvre in Paris continued the excavation from 1851-1855. Edward Chiera of the Oriental Institute of the University of Chicago continued the work in 1929. In the ruins of the palace a prism was found listing the rule of the Assyrian dynasties (Reade 1986:10-12).

In the last half of the nineteenth century several British excavators worked on the site. One of these was George Smith, who studied cuneiform and eventually was able to decipher a number of the tablets including the Gilgamesh story and Enuma Elish which he published in 1876. The subjects on these tablets included religion, literature, and administration. Many of the tablets were in the form of letters. Branches of learning included mathematics, botany, chemistry, and lexicology (McCarter 1996: 19-21).

Between 1927-32, Nineveh was excavated by R. Campbell Thompson and others. They were able to uncover

the archaeological evidence that can be traced back to 4,500 BCE. More recent work, including some restoration, has been undertaken by the Iraq Department of Antiquities.

4.4.2.5 Nineveh and the Southwest Palace built by King Sennacherib.

In the later second millennium BCE, Nineveh was an important city with a prestigious temple of the goddess Ishtar. Sennacherib chose it as his capital and laid out a city surrounded by walls approximately twelve kilometers in circumference. See Figure 4.4-12. The old tell formed the main citadel and was where, at the beginning of the seventh century BCE, Sennacherib built the so-called Southwest Palace, decorating it with carved stone reliefs.

Sennacherib's city wall, more than 12 km (7.5 miles) long, enclosed an area of about 700 hectares (1730 acres); it was pierced by 15 great gates, five of which have been excavated. The northern Nergal Gate, with its original flanking bull colossuses, has been restored. Canals provided water to the city and to municipal gardens that were stocked with unusual plants and animals. Sections of an aqueduct built by Sennacherib still stand at Jerwan, 40 km (25 mi) away. The palaces of Sennacherib and his grandson Ashurbanipal stand at Kuyunjik, the citadel of the site. Their walls and doorways were lined with sculptured reliefs, many of which are now in the Louvre, Paris, and the British Museum, London.

Sennacherib's palace, named the southwest palace, comprised at least 80 rooms; the throne room suite, now partially restored, still contains some of its bas-reliefs depicting scenes of conquest. See Figure 4.4-13. One of

these conquest was the Judean city of Lachish. Details on these bas-reliefs have been discussed in chapter 4.8 of this dissertation, titled, Weapons and Warfare. Ashurbanipal built a second palace on Tell Kuyunjik, the North Palace, which contained the famous lion hunt reliefs (Reade 1986: 36-43; 56-60). See Figure 4.4-14

Archives of cuneiform tablets were found in both palaces, but the library of Ashurbanipal forms an unrivaled epigraphic source for current knowledge of Mesopotamian history. It contained more than 20,000 tablets and fragments, many of which are copies of ancient Mesopotamian texts such as the Sumerian Epic of Gilgamesh and the Babylonian Flood story; its subjects range from literature to religion, the sciences, and lexicography (Douglas 1998:143).

The E-mashmash Temple, dedicated to the goddess Ishtar, also stood on Kuyunjik; its series of superimposed structures, dating back to the 3rd millennium BCE, were maintained by successive rulers of Assyria and survived until at least AD 200. The imperial arsenal, built by Sennacherib's successor, Esarhaddon (r. 680-669 BCE), stands largely unexcavated at Nebi Yunus, a mound on the city wall 1.6 km (1 mi) south of Kuyunjik. It is still covered by modern buildings, among them a mosque reputed to contain the tomb of the Prophet Jonah (Schoville 1978:198-200).

4.4.2.6 Other Sources Regarding the Assyrian Kings

More detailed information about the Assyrian Kings and material uncovered from their palaces can be found in the following sections of this dissertation: 4.5 Literacy and Inscriptions (under Assyrian Inscriptions); details about the campaigns of the Assyrian kings are found in 4.8 Weapons and Warfare and 4.3 Town Planning; The Banquet of Ashurnasirpal II is found in Food Preparation, 4.11; and information on the Assyrian gods and temples are found in 4.6, titled Temples, Gods, and Cult Objects. Biblical references are given when they apply to these specific categories.

4.4.3 Stables and Store Buildings

A common type of Israelite public building was a rectangular, elongated structure divided internally by two rows of stone pillars into a central passage and two flanking aisles. Such units began to appear on the coastal plain during the eleventh century BCE at Tell Qasile and Tell Abu Hawam. They became common at Israelite sites from the ninth century BCE onward.

At Hazor, one such building was constructed in the ninth century BCE. At Megiddo there were seventeen examples grouped in two clusters. At Lachish two buildings stood at the southern side of the royal enclosure; and at both Tell el-Hesi and Tel Beersheba three adjoining public edifices of this type were discovered. At Beersheba they were next to the city gate. The dimensions of the structure varied from 16 to 18 m in length and 10 to 12.5 m in width. In each row there were ten to fourteen pillars, usually consisting of solid monoliths with a square section. In most cases, the aisles were paved with cobblestones and the central passage with beaten earth. The buildings are

thought to have had a higher roof in their central part with windows rising higher than adjacent outside structures to provide light and air for the interior.

The largest group of such public buildings was discovered at Megiddo Stratum IVA (see Megiddo under sites). Five were located on the southern side of the mound, at the back of a large square courtyard surrounded by a wall. The other twelve were in the northern part of the mound arranged in three groups around a rectangular courtyard. The features of these structures that contributed to their identification as stables included: their general layout plan; stone troughs found between the pillars; holes in the pillars for tying; and the dimensions of the aisles. The large fenced courtyard in front of the southern complex was explained as a training area. It has been estimated that the Megiddo stables could have accommodated about 450 horses. Horses were very important at this time. Solomon is said to have erected "cavalry cities" and "chariot cities," and to have fourteen hundred chariots and twelve thousand cavalry men (1 Kings 9:19 and 10:26-29). Ahab is mentioned in the Assyrian description of the battle of Qarqar as having had twelve hundred battle chariots, the largest number among the allied forces in this battle. The valuable battle horses and chariots had to be well maintained in appropriate structures, such as those at Megiddo. (1990 Mazar: 476). See Figure 4.4-2.

Other pillared buildings of a public nature were explained by their excavators as public storehouses that were built to store grain, oil, and wine (2 Chronicles 32:28). The public storehouses found at Beersheba and Hazor were expected as these cities were regional administrative

centers where food was stored and then distributed to army units.

The function of these rectangular pillared buildings, however, has been a matter of controversy for several years. J.B. Pritchard, followed by Y. Aharoni and Z. Herzog, suggested that the Megiddo buildings were royal store buildings. This view was strongly opposed by Y. Yadin and J. S. Holladay; Holladay even suggested that all pillared buildings of this type should be identified as stables (Mazar, 1990:477-78).

In addition to the pillared buildings, public storage space was also located in casemates of citadels and royal enclosures; at Hazor, Samaria, Jerusalem (the Ophel site), and Lachish, specially designed elongated storage rooms were discovered.

4.4.4 Four-room Pillared Houses

The four-room house with rows of pillars is a defining trait of the Iron Age and found both in the hill country and on the Philistine plain. By Iron II this house design was almost the standard type used in domestic architecture. See Figure 4.4-3.

The pillared four-room houses had several important characteristics. They were built in a variety of sizes and plans. The structures were divided by one or two rows of pillars into several rectangular units. These pillars were usually monolithic stones with a square section and were 1-1.5 m in height. In areas, like the northern Negev where large rocks were often unavailable, the pillars were made by piling up large stones. Stone lintels preserved in several cases show that the passageways between the pillars were low, suitable for domestic animals such as sheep. The

area behind the pillars was usually paved with cobblestones. Rooms at the side of the central unit or at its rear were usually elongated, rectangular spaces.

The walls of houses were often made using field stones for the lower portions, up to about 1 m high. The upper portions were often made of mud-brick. The lower stones withstood the surface water flow and gave stability. Water could also drain out of an enclosure by passing between the lower rocks if sealant was not placed between the rocks.

Rock walls could be made quite resilient by pounding smaller rocks in between larger ones in the wall. This was continued with rocks and stones of decreasing size, thus effectively immobilizing the larger rocks. On top of the rocks, the mud-bricks could be set securely and could be repaired after the rainy season if needed. Roofs were often made starting with small logs or strong tree branches. Successively smaller branches and even ones with leaves still attached would be laid on top. Finally a topping of mud would be put on top to give a generally water resistant seal.

The existence of a second story can be inferred from stone steps preserved in several cases as well as from the massiveness of the stone pillars on the ground floor. Where stone steps did not exist, access to the second floor could be gained by a wooden ladder. In the Biblical Hebrew, a second story of a dwelling is the "aliyah" (2 Kings 4:10). This is the same word used today of Jewish immigrants moving (up) to Israel.

The central unit of these houses is usually interpreted as an open air courtyard. The pillars are thought to have supported a roofed area alongside the

courtyard serving the household animals. The area of such houses varied between 50 and 110 sq m; their size, plan, and quality of construction were determined by the social status of the owner and the space available for construction.

For non-royalty, the most advanced form of housing is considered to be the four-room house. The rectangular building had average dimensions of 10 x12 m. The entrance from the exterior usually led directly into the rectangular open air courtyard. That courtyard "room" was usually flanked on the right and the left by various spaces or rooms. At the rear of the open air courtyard was usually another transverse room. One of the spaces along the courtyard was usually a pillared roofed area. There were many variations to this plan: pillars were sometimes found on both sides of the courtyard; in other cases, no pillars at all were used.

"Four-room houses" were built for the first time in the eleventh century BCE at sites such as Tel Masos and Tell Qasile. During the Divided Monarchy they were used mainly in the northern kingdom of Israel (Hazor, Tell el-Farah, Shechem), while in Judah they appeared on rare occasions. One Judean site was Tell en Nasbeh.

At Hazor, Tell el-Far'ah, and Shechem, the four-room house appears to have belonged to rich families, landlords, or high officials, as they are the largest and most elaborate buildings in the town. Other "four-room houses" that were smaller were found in country sites near Jerusalem, the Samarian Hills, and south of Jericho. See Figure 4.4-4, City of David.

Tell el-Farah (Tirzah) is very interesting. Here the "four-room plan" determined the standard for all the houses

in several occupation levels. In the tenth century BCE (Stratum VIIb), the structures there were of almost identical size and plan. However, in the ninth and eighth centuries they varied in area, perhaps reflecting increasing social differentiation (Mazar 1990:486).

Strata VII-V at Tell es-Sa'idiyeh provided excellent examples of the variety of house structures in the Jordan Valley. The houses of Stratum VII dated to the ninth century. They are small rectangular structures with two rooms except for one in which there were three rooms. These houses open onto a narrow street with a drainage ditch in the center. In the next level, the houses are rectangular one room structures, a style more characteristic of the Transjordan. In Stratum V, the pillared house is the exclusive type of house structure. See Figure 4.4-3. A complete block of houses, constructed of mud-brick and with earthen and stone floors, ovens, and storage bins between pillars, could be entered from the narrow streets surrounding the block. Pritchard uncovered considerable evidence of burning with fragments of roof timbers, layer of gray ash and scorched bricks and artifacts. He hypothesized that the level was destroyed at the end of the seventh century when the Assyrian kings destroyed most of the other cities in the kingdom of Israel (Shiloh 1970:180-190).

It is interesting to see that at Beersheba and Tell Beit Mirsim, the back room of the house was part of a casemate wall surrounding the town. The house courtyard was utilized for conducting various household duties (Mazar 1990:488). Baking ovens were often located in the courtyard. In some places the ovens were outside the house

in an open area or in a special small chamber. Cereals were ground in the courtyard on grinding stones usually made of basalt or other hard stone. These house courtyards also had stone or plastered vats with attached working surfaces that may have functioned as simple wine presses. Olive presses of specific forms are also often found as well as other built-in installations which represent specific activities.

Rock-cut cisterns have been located only at places where the rock was suitable for cutting and easily accessible, such as Tell en-Nasbeh. In general, however, the daily water supply was taken from nearby springs, wells, or public water projects.

The number of people who lived in each housing unit has been estimated to be a "nuclear family" of five to seven persons. Larger houses could accommodate up to approximately ten or eleven people in all. The amount of pottery vessels found in a house provides some indication of the number of its occupants. Houses at Timnah (Tel Batash) contained an astonishingly large quantity of pottery vessels. In one small dwelling, comprising a courtyard and two square rooms, there were thirty bowls, eight kraters, eleven cooking pots, fourteen storage jars, twelve jugs, eight dipper juglets, and several other vessels. The number of tenants in this unit must have been relatively high (Mazar 1990:487-488).

4.4.5 Concluding Comments on Architecture

The primary royal buildings of the Iron Age II that have been identified are in Ramat Rahel, Samaria, Megiddo, Hazor, and Lachish. Starting in the tenth century BCE until the collapse of the kingdom of Judah, Israelite royal buildings were typified by ashlar masonry, Proto-Aeolic

capitals, carved windows and stone cut crenellations on the upper part of the walls. Stone was not used for many houses. Only the wealthy houses, kings' palaces and public structure such as the Temple, city walls, and the store cities such as Megiddo were normally built of stone.

Excavations at Samaria have confirmed the splendor of the Israelite capital in the eighth century BCE. 1 Kings 22:39 stated, "Now the rest of the acts of Ahab and all that he did and the ivory house which he built and all the cities which he built . . ." At Samaria numerous ivory artifacts were found. Jeroboam II refortified the city with a double wall, reaching to as much as thirty-three feet in width in exposed sections, comprising fortifications so substantial that the Assyrian army took three years to capture the city (2 Kings 17:5).

Archaeology was supported by Amos' prophecies that shed light on the vastly increase commerce and wealth of Jeroboam's realm (793-753 BCE) with consequent luxury and moral decline. Glaring social and economic inequalities were fostered by the selfish and unscrupulous conduct of the rich (Amos 2:6; 8:6). Simple dwellings of unburned brick gave way to "houses of hewn stone," and Ahab' ivory palace was imitated by many of the wealthy of the land. Amos wrote in 3:15, "'I will also smite the winter house together with the summer house; the houses of ivory will also perish. And the great houses will come to an end,' declares the Lord." Amos regarded stone houses as a luxury made possible by the exploitation of the poor (Amos 5:11). These prophecies combined with the evidence of excavations at Samaria, Megiddo and Hazor may lead many people to the conclusion that Israel did not listen to God's warning

through the prophets and eventually they were taken by the Assyrians.

The excavations of the Assyrian kings' palaces provided not only vivid awareness of their impressive architecture but records left on their walls of historic events that affected Israel and Judah. At least ten of the kings of Israel and Judah were named on their walls. These reliefs along with other inscribed monuments were especially valuable in documenting military action against Israel and their neighbors. The prophet Isaiah describes the Assyrians as a rod (Isa.10.5), a flood (Isa.8:7, 8) and a razor (Isa. 7:20). The Assyrian kings' palaces were uncovered at Nimrud, Nineveh and Khorsabad. The main kings were Ashurnasirpal II, Shalmaneser III, Tiglath-Pileser III, Sargon II and Sennacherib. More will be discussed about these under closing comments related to Inscriptions and Warfare.

In Israel and Judah pillared buildings of a public nature were explained by their excavators as public storehouses that were built to store grain, oil, and wine (2 Chronicles 32:28). The public storehouses found at Beersheba and Hazor were expected as these cities were regional administrative centers where food was stored and then distributed to army units.

In addition to the pillared buildings, public storage space was also located in casemates of citadels and royal enclosures. At Hazor, Samaria, Jerusalem (the Ophel site), and Lachish, specially designed elongated storage rooms were discovered.

The four-room house with rows of pillars is a defining trait of the Iron Age and found both in the hill country

and on the Philistine plain. By Iron II this house design was almost the standard type used in domestic architecture. In chapter 42:3, Isaiah talked about the rod (reed) and the lighting of the houses to express what God was telling the people, "A bruised reed He will not break, And a dimly burning wick He will not extinguish . . ."

Excavations of the 4-room houses and other houses of this time period indicated that their roofs were constructed of wood beams (usually sycamore) in which branches were laid across that were bound together by mud. The roofs were sometime green because the seeds in the mud sprouted. Isaiah's indicated that green sprouts could rapidly be scorched by God, "They were as the vegetation of the field and as the green herb, as grass on the housetops is scorched before it is grown up" (2 Kings Chapter 19:26).



Lachish (Tell ed-Duweir) Palace Fort. Looking towards the podium of the palace fort, from the main street. At the end of the Judean monarchy, this governor's residence was half an acre in size. It is the largest Iron Age structure known in Israel. Built on the summit of the tell, this palace was built in three discernible phases which help archaeologists to understand the length of the cubit in the earlier and later periods. Evidence for the stabling of horses in the courtyard has been found.

Figure 4.4-1



a. Beersheba, house: Better known as an Israelite pillared building, this typical structure has been found around the country throughout the Iron Age (1200-600 BCE). Subdivided by pillars into smaller rooms, these houses were often built against the city wall, with the house's back wall forming a portion of the city's casemate wall.



b. Three tripartite pillared buildings were revealed in the excavations. The archaeologists believe that these are storehouses in part because of the large quantity of vessels found inside. Other scholars regard this building design as characteristic of stables; evidence suggests this is a more accurate identification.

Figure 4.4-2



Tell es-Sa'idiyeh pillared houses

Figure 4.4-3



a. Stepped Stone Structure (Milo) Revealed in the excavations of Duncan and Macalister, Kenyon and Shiloh, this is one of the largest Iron Age structures in Israel, 18 m in height. It apparently dates to the end of the Jebusite city. This structure probably supported a royal building, such as the king's palace.



b. House of Ahiel This is a typical Israelite four-room house. The outside stairway presumably led to the flat roof. The outside of Ahiel's house (east) was badly preserved, but the western side on the hill was well preserved.

Figure 4.4-4



a. View of the Central Palace Excavation of Tiglath-Pileser
III



b. Polish Excavation Team of Tiglath-Pileser's III
Palace at Nimrud 1976

Figure 4.4-5



a. West Area I: cache of reliefs from Central Palace,
Tiglath Pileser III



b. West Area I: cache of reliefs from Central Palace,
Tiglath Pileser III

Figure 4.4-6



Winged Assyrian Bull from Khorsabad, palace of Sargon of
Assyria

721-705 BCE Gypseous alabaster H 4.40 m

King Sargon II built his palace in the citadel of the new town that he founded near Nineveh, which was discovered by Paul-Emile Botta in 1843. The gates were guarded by bulls with human heads. These benevolent spirits, called "lamassou", were the guardians of the foundations of the world; in the same way they assured those of the palace. They are sculpted in the round for the foreparts and in high relief for the remainder of the body. They are shown with five legs. Seen from the front they are motionless, but seen from the side they walk. The inscription between the legs includes the titles of Sargon. Then it relates the construction of his town, called Dur-Sharrukîn, i.e. Fort Sargon.

Figure 4.4-7



Sargon II and a high official

Khorsabad, palace of Sargon II (721-705 BCE) H 3.30 m

At the end of the 8th century BCE, Sargon II, king of Assyria, built a vast palace of over ten hectares in his new capital, Dur-Sharrukîn (now Khorsabad). Part of the rooms and courtyards were covered with a rich sculpted decoration. On this slab which was placed on a façade of the northern part of the palace (façade L), Sargon II, recognizable by his truncated cone headdress, is shown welcoming a high official who could be identified as Sennacherib, the crown prince.

Figure 4.4-8



Restoration of Ashurnasipal II

(Northwest) Palace at Nimrud

Work done by the British School of Archaeology

Figure 4.4-9



a. Two carved figures of Ashurnasirpal II, facing a stylized Assyrian sacred tree from the Northwest palace at Nimrud on the eastern wall. This shows what the original bas-relief would have looked like. This relief was placed directly behind the throne of the King.



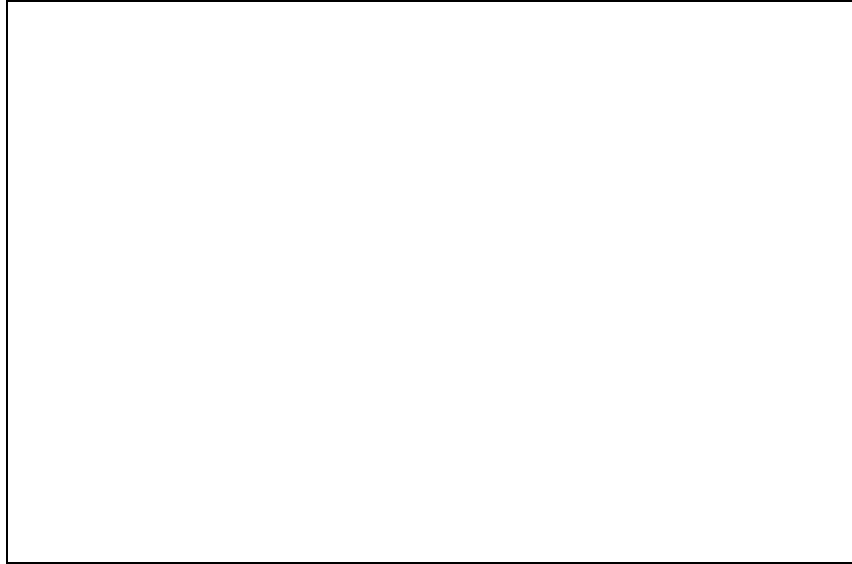
b. Ashurnasirpal II, Throne Room, Nimrud. This in situ photo was taken in May, 2003. The heads of the king and the divine attendant were removed by Layard in the 19th century and are now in the Prince of Wales Museum, Bombay. Recent looting resulted in the removal of the tree top and the god in the winged disk. Meuszynski 1981, plate 2:1.

Figure 4.4-10



Pictures showing what was on the in-situ Bas-Relief (top) from Ashurpanipal II Palace(photo of I-9 taken in the early 1970s for Meuszynski's records). The drawing (bottom) shows a sacred tree with genie's standing by it in an attitude of adoration such as was on the original Bas-relief.

Figure 4.4-11



a. Ancient Nineveh now known as Tell Kuyunjik. A deep excavation at the site, carried out by Max Mallowan, established a chronology against which many of the other sites in north Mesopotamia are compared.



b. Ancient Nineveh: The city is marked by two large mounds, Kuyunjik and Nebi Yunus. The remains of the city walls. This ariel view shows the mounds, the ancient city walls, and the Tigres and Khosr rivers. It is located opposite the modern city of Mosul, N. Iraq.

Figure 4.4-12



a. Tell Kuyunjik, Sennacherib Palace Site Museum at Nineveh. A deep excavation at the site, carried out by Mazx Mallowan, established a chronology against which many of the other sites in North Mesopotamia are compared.



b. Sennecherib's Throne Room V with sculptures still in place.



Ashurbanipal built a second palace on Tell Kuyunjik, the North Palace, which contained the famous lion hunt reliefs. In the summer of 612 BCE, Nineveh fell to the combined forces of the Medes and Babylonians. Occupation continued, however, for a further 1000 years before Nineveh was eclipsed by the city of Mosul, on the other side of the river

Figure 4.4-14