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A Possible Reconstruction of the Administrative Structure of the Kingdom of Israel According to Pottery Analysis

David Ben-Shlomo

Abstract

The kingdom of Israel during Iron Age II, which grew to be a strong political unit in the southern Levant at least during the 9th and 8th centuries BCE until its destruction by the Assyrians, was based in the Samaria Hills. The paper suggests an examination of the economic and cultural structure of the political unit in this region during the Iron Age through the analysis of pottery, its technology, and movement patterns in the Samaria Hills region. The main facet suggested for this examination is compositional analysis. While compositional studies of Iron Age pottery from the coastal plains – the shephelah – and more recently Judea, are numerous, the information on provenance and technological research from the Samaria Hills is so far very limited. The research aims are to fill this gap with the help of pottery from the main excavated sites, as well as survey material dating from the beginning of the Iron Age to the Assyrian destruction in 722 BCE. The pottery represents both its use as a vessel in daily life, and as a container for various commodities (mainly liquids) that were traded or taxed. An analysis of pottery from settlements in various hierarchical tiers of the Samaria Hills is suggested: capital cities, large, and smaller settlements. Both the production scale and trade patterns may be investigated through this analysis. The nature of the region of the Hills of Bethel – a border zone between Judah and Israel can also be examined according to ceramic evidence.

The kingdom of Israel during Iron Age II, which grew to be a strong political unit in the Southern Levant at least during the 9th and 8th centuries BCE until its destruction by the Assyrians, was based in the Samaria Hills. Archaeological excavations in the region began in the early 20th century, when archaeological research was related to the search for links between the biblical narrative and archaeological records, in particular to the Israelite conquest and settlement of the hill country described in the book of Joshua. Many of the sites as Bethel, Tell el-Fûl and Shechem,

were excavated and linked to major biblical towns mentioned in the books of Joshua, Judges and Samuel according to their location, local names and archaeological remains. Yet, the results of the archaeological excavations revealed a more complex reality, often different to the alleged interpretation of the biblical record (see e.g. Mendenhall 1962; Noth 1966; summary in Na'aman & Finkelstein 1994, 9–14). The second wave of research came with the intensive surveys by Adam Zertal (2004; 2008; 2012; Bar & Zertal 2016; Zertal & Mirkam 2016; Zertal & Bar 2017), Israel Finkelstein (Finkelstein et al. 1997) and Itzhak Magen (Magen & Finkelstein 1993) carried out from the 1970s onwards. For the first time, the settlement history of this region throughout the ages was recorded, indicating two peaks during the Middle Bronze and Iron Ages. Afterwards no comprehensive studies were published or carried out according to updated and modern excavation material and the region may still be relatively 'under-studied'.

A major component of the Iron Age material culture is naturally the pottery assemblage. Pottery vessels can reflect the function of the contexts where they were found and certain cultural aspects of the people using it. The analysis of the production provenance of the pottery can reflect the inter- and intra-regional communications and trade between different sites and regions. Moreover, changes in the technology and production mode of the pottery can reflect economic and administrative changes. One of the important tools to this end is compositional analysis of pottery, which today is a major standard method for interpreting ceramic finds. This analysis is largely based on the build-up of published data and interpretation of petrographic and chemical analysis studies. While compositional studies of Iron Age pottery from the coastal plains, the Shephelah, and, more recently, Judah are numerous, the information about provenance and technological research from the Samaria Hills is so far very limited. Currently, the Samaria Hills region is almost devoid of such published scholarship, which highly limits the interpretation one may draw from ceramic evidence from excavations and surveys in the region. This lack is significant, given various archaeological questions that relate to this region during Iron Ages I and II: namely the possible movements of populations, various ethnic identities, and the rise and development of territorial political units and the hierarchy of sites within them. The suggested research aims are to fill this gap dealing with pottery

from the main excavated sites as well as survey material dating from the beginning of the Iron Age until the Assyrian destruction in 722 BCE.

The Samaria Hills: Geography and Geology

The region under study includes the area north of Jerusalem and south of the Jezreel Valley, the geographical units of the Bethel and Samaria hills.[1] The Samaria hills are somewhat lower in elevation than the Judean Mountains and contain a series of wide valleys, all in a NW-SE orientation (e.g. Harel & Nir 1984, 70–74); these include the Shiloh, Shechem, Tirzah, Sanûr and Dothan Valleys (from south to north). These valleys are both wide and high and thus are extremely fertile and suitable for agriculture; they also form the main land routes. The eastern part of the Samaria hills is wetter than the south, since precipitation penetrates more easily through the valleys, and thus the desert line is further east than in Judea (Harel & Nir 1984, 74). Hence, the Samaria hills region has a much larger capacity for human settlement and agriculture than the Judean hills.

The geology of southern Samaria was described by Aharon Horowitz (1997) in the Ephraim Survey publication. The geological formations in the region of Bethel and the southern Samaria hills vary considerably between east and west and north and south. The southern region, north of Jerusalem, is dominated by various Lower Cretaceous geological formations. In the region of Ramallah the Soreq formation is exposed with mostly dolomite and marl (*Ramalla Map*). To the west and north, intermediate exposures of Kefira formation with dolomite and limestone, and the Giveat Yearim formation with dolomite and quartzolite, occur. Smaller enclaves of the younger, Cenomanian formations of Kesalon, Beit Meir and Moza, with mostly marl dolomite and chert, occur throughout the region, mostly on and west of the dividing ridge line. To the east, towards the eastern Samaria foothills, the Cenonian Aminadav formation has dolomite and limestone, and to the east, there is the even younger Turonian Netzer formation with limestone and dolomite, as well as Senonian formation of Menuha with chalk and marl. This picture continues more or less until about 5 km south of Nablus/Shechem,

1 The Judean hills region is often described as continuing up to Nahal Shiloh, near Shiloh in the north, while the Samaria hills include both the Carmel and Gilboa (e.g. Nir 1995, 38, 72). Yet, the Bethel hills, just north of Jerusalem will also be included here since historically they were part of the Israelite kingdom and may have a similar material culture.

where much younger Eocene formations are exposed with mainly the Ghareb/Taqiye, Timrat and Bar-Kokhba formations (Avedat Group) with limestone, chalk, fossils and clay; some enclaves of Senonian Menuha and Aminadav formations still occur (*Ariel Map*). In particular the 'Shechem syncline' is characterized by softer chalk in contrast to the harder dolomite common in the south (the 'Ramallah anticline'). North of Shechem and Samaria, these calcareous formations become even wider and dominate central and eastern Samaria (*Shekhem Map*). To the west, Turonian Bina formation is dominant with limestone and chert. Regarding soils, the Samaria region is covered mostly by terra rossa soils; rendzina soils are found on the eastern foothills

The Rise and Fall of the Kingdom of Israel during Iron Age II

The area of Samaria can be defined as a certain geographical-cultural unit within the southern Levant since it is rather isolated from the main trade routes and the coast on the one hand, and is a rather fertile and agriculturally rich area on the other. During Early Bronze Ages II-III (as at the 'Ai and Tell el-Far'ah [N]), and in particular during Middle Bronze Age II (ca. 2,000–1,550 BCE), fortified urban centers were uncovered, including, for instance, Tel Shiloh (Finkelstein et al. 1993), Bethel (Kelso 1968) and Shechem (Campbell 2002, 105–143). During the Late Bronze Age, the region witnessed a distinct decline (Broshi & Finkelstein 1992, 56).

Much of the information on the settlement history of Samaria comes from three main large-scale surveys conducted from the 1970s onwards: the Land of Ephraim Survey directed by Finkelstein (Finkelstein 1988; Finkelstein et al. 1997), the Benjamin Survey, directed by Itzhak Magen (Magen & Finkelstein 1993) and the Manasseh Hill Survey directed by Adam Zertal (1994; 2004; 2008; 2012; Bar & Zertal 2016; Zertal & Mirkam 2016; Zertal & Bar 2017). Recently, a more focused survey in the region of southern Samaria has also been conducted (Tavger 2015; Tavger et al. 2016). The results of these surveys, as well as most evidence from the so-far excavated sites, indicate a distinct rise in the number of settlements during Iron Age I. In eastern and northern Samaria there is a rise from 26 sites in the LB III to 94 in the Iron Age I and a further rise to 192 in the Iron Age II (Zertal 1994, 50–51), while in southern and western Samaria (the 'Land of Efraim Survey') there is a rise of 115 sites in the Iron Age I (versus only five in the LB III) and a further rise to 190 or even up to 238 sites during Iron Age II (Finkelstein 1988, 185–204;

Finkelstein et al. 1997, 948–951).[2] This peak in human settlement activity is likely to be linked to the Israelite kingdom during Iron Age II.[3] During Iron Age II in particular there may be a hierarchy of settlements in the region, with major administrative center and capital cities on the top tier (e.g. Broshi & Finkelstein 1992, 50–51).

Initially, much research was devoted to the issue of the Israelite settlement in the hill country during Iron Age I (e.g. Alt 1925; Albright 1935; Mendenhall 1962; Noth 1966; Gottwald 1985; Finkelstein 1994; Na'aman & Finkelstein 1994; Zertal 1994; Finkelstein 2013,13–27). The early excavations already revealed that the scenario of a quick and violent military occupation of this region by the local Canaanites, as described in the book of Joshua, and supported by some archaeologists (e.g. Albright 1935), is not supported by the archaeological evidence from Iron Age I (ca. 1200–1000 BCE). Yet, during this period there is revival of several centers and large sites such as those excavated at Bethel and Shiloh, Mount 'Ebal, and Tell el-Fûl, on top of the scores of new settlements known from the survey. Zertal interpreted Mount 'Ebal and possibly other smaller sites in the region as tribal cultic centers (e.g. Zertal 1986; 1994, 61–69), playing an important role in the crystallization of a political entity later on. He also associated certain pottery types to the population involved and its ethnic identity (Zertal 1994, 51–54). Finkelstein (2013, 24–26) has suggested that Iron I sites such as Shiloh (and possibly Mount 'Ebal) served as redistribution centers (rather than cultic religious centers for a polity existing in the Samaria hills). At the same time, sites such as Megiddo, Beth Shean and Rehov in the northern valleys continue the urban Canaanite culture ("New Canaan"; ibid., 28–32). Several theories were offered to explain the new Iron Age settlements in the hill country including movement of a (new?) pastoral population from the east (Alt 1925; Noth 1966; Zertal 1994; 'peaceful infiltration'), movement of population from the Canaanite centers in the west and north (Mendenhall 1962, the 'social revolution model'), and settling of local hill country pastoral populations (see Finkelstein 1988, 336–351; 1994; though later Finkelstein suggested other models, e.g. Finkelstein 2013, 22–23).

2 Altogether there is a rise from 50 hectares to 250 hectares of settled area from LB II to Iron Age I.

3 Certain population estimates in this region are over 160,000 inhabitants (Broshi & Finkelstein 1992, 53–55, Table 1), most of them in the north.

The late Iron Age I and early Iron IIA are characterized by a group of fortified and well-planned sites in the Bethel hills and northern Judah (fig. 1). These include Tell en-Naṣbeh (McCowen 1947), Gibeon (Pritchard 1962), Tell el-Fûl (Albright 1924), and Bethel (Kelso 1968). A smaller fortified site is Khirbet Dawwara (Finkelstein 1990). A possible exception is the site of Shechem, which diminished during this period. Most of the sites were not large (less than 1 hectare) but were usually fortified. Some of these settlements were abandoned or diminished in the late Iron IIA. Finkelstein interpreted this phenomenon as the rise of the Kingdom of Saul, a political entity controlling the Samaria hills as well as northern Judah, and its center in Gibeon/Gibea; Tell en-Naṣbeh is also a key site in this period (Finkelstein 2013, 51–58). Omer Sergi (2013; 2015) suggested that in this area, the density of Iron I settlements reflects the rise of an early Judahite state with its center in Jerusalem.

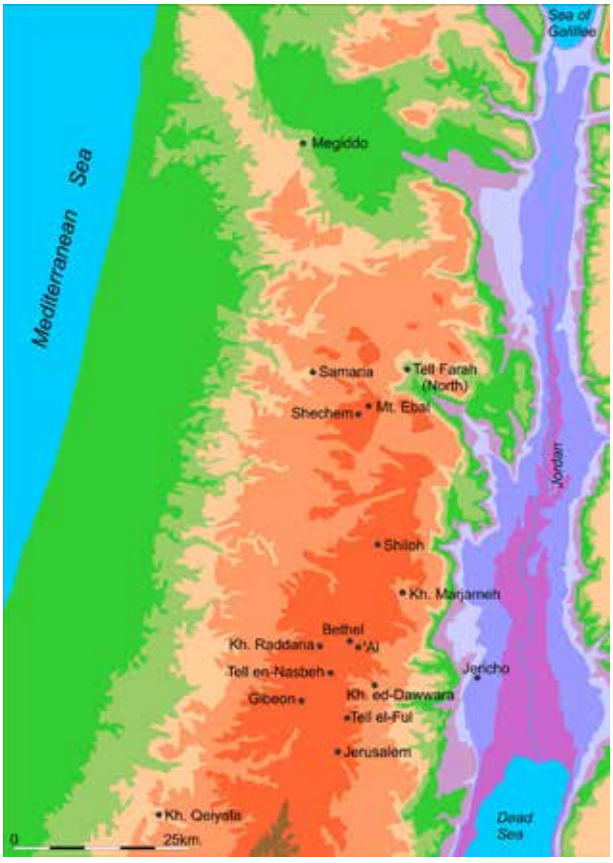


Figure 1: Map of main sites mentioned in the text

The site of Khirbet Qeiyafa in the Elah Valley (see e.g. Garfinkel et al. 2016) is also contemporary, usually seen as part of the early Judahite political entity (ibid., 173–187). Na'aman interpreted Qeiyafa as a site relating to a Canaanite entity and linked the Bethel hills (or 'Benjamin' area) to Judah rather than to Israel during Iron Age IIA (Na'aman 2009), while Finkelstein saw it as part of the northern kingdom of the tradition related to Saul (Finkelstein 2013, 38). According to Finkelstein, during this period the political unit based in the Samaria hills may have also controlled the Jezreel Valley and possibly parts of the Sharon coast, and parts of the Gilead to the east (Finkelstein 2013).

The site of Tell Farah (N), excavated by Roland De Vaux (Chambon 1984) and identified as Tirzah, may have been, according to the book of Kings, the capital of a political entity in the Samaria hills for several generations in the later part of the 10th century BCE. In 1Kings (15, 21), King Ba'asha is described as moving to Tirzah (possibly Chambon 1984, 9–21, Level VIIa) from Ramah. Possibly, it replaced the Gibeon and Gibea (Tell el Fûl?) centers (Finkelstein 2012; Finkelstein 2013, 63–81, dating this Phase VIIa to the early Iron Age IIA). It lacks monumental buildings during this period, yet it is fortified. The subsequent level VIIb at Tell Farah (N) shows a higher degree of urbanization and fortification (Chambon 1984, 22–38). Several other sites of various sizes from this period, including for instance A-Tell ('Ai; Callaway 1976), Khirbet Raddana (Callaway & Cooley 1971; Lederman 1999), Shiloh (Finkelstein et al. 1993) and possibly Khirbet Marjameh in the eastern foothills (Mazar 1995), a large fortified site of 3 hectares, can also shed more light on the settlement development in this region during Iron Age IIA. Regarding the material culture, Iron Age IIA pottery is also well defined by the change in the vessel shapes and the abundance of red burnished wares (e.g. Holladay 1990).

In the next stage, during the early 9th century BCE, the new capital of Israel, Samaria, was built. The site is characterized by monumental buildings, a palace, and heavy fortification (e.g. Crowfoot et al. 1942, 93–106; Finkelstein 2013, 84–94). The Omride dynasty may have controlled the Jezreel Valley and the Galilee up to Hazor to the north, the Sharon coast to the west and Gilead to the east. Its border with Judah may have been at Bethel, which controlled this 'Benjamin' region (see Finkelstein 2013, 105–109). This period also depicts a prosperous economy with olive oil and wine as main commodities in the Samaria hills area

(Finkelstein 2013, 112). Writing became more common as demonstrated by the Samaria ostraca and there is evidence of the development of administration and bureaucracy. The 109 Samaria ostraca (Reisner et al. 1924, 227–246), probably dating back to the 8th century BCE, may be the most important direct evidence of administration in the capital of the Israelite kingdom. In particular, the transport of goods as wine and oil is reflected. However, most place names seem to come from the region of the city in northern Samaria and neighboring towns. It was suggested they reflect deliveries to and from royal domains of the kingdom of Israel (Aharoni 1979, 277–285; Suriano 2016) or a clan-based territorial structure of the Israelite kingdom (Niemann 2008). Imports from Phoenicia and Cyprus are more common, while it was suggested that there were also contacts between Israel and Arabia and the southern Negev during this period (Finkelstein 2013, 139), possibly in relation to the cultic site at Kuntillet ʿAjrud in Sinai.

The latter part of the 8th century BCE may be characterized by a decline in the settlements of the Samaria hills, ended by their total destruction by the Assyrians ca. 722 BCE. It has been suggested by some scholars that during and after this period, much of the population of southern Samaria moved to Jerusalem and Judah (Broshi 1974; Broshi & Finkelstein 1992, 56; Finkelstein 2013, 154–155). Other scholars have claimed that there is no archaeological evidence for such population movements (e.g. Na'aman 2014). Following the Assyrian conquest, the region became a Neo-Assyrian province with its center at Samaria, and according to Neo-Assyrian texts, deportees from distant regions were brought in to the city, while previous inhabitants of Samaria were deported to sites in other parts of the empire (e.g. Oded 1979; Na'aman & Zadok 2000).

The Pottery of the Israelite Kingdom and Compositional Analysis Studies

Several more recent studies rediscussed the Iron Age evidence from the Bethel hills region (Finkelstein 1999), Judahite expansion into Bethel hills (Sergi 2015) and remains at Samaria (Finkelstein 2011). In particular, Finkelstein discussed this region during the Iron Age (Finkelstein 2013, 44–47). Yet, none of these studies were focused on the pottery assemblage and technology. More site-specific studies discussed pottery in a limited manner, such as at Tell en-Naṣbeh (Wampler 1947), Samaria

(Crowfoot et al. 1957; Tappy 1992; 2001), Bethel (Finkelstein & Singer Avitz 2009), Shiloh (Bunimovitz & Finkelstein 1993), Kh. Raddana (Lederman 1999), and a study on Iron II bowls with wedge-shaped imprints (Itach et al. 2017). During Iron Age IIA in the Bethel Hills (see fig. 1), most pottery was defined as locally produced (fig. 2; see e.g. Finkelstein & Singer Avitz 2009, 40), though some presumable imports were defined as well as at Tell Naṣbeh (Bothmer 1941; Zorn 1993a; Brody 2014a; Brody 2014b). Evidence for Iron Age pottery production comes mostly from Tell en-Naṣbeh where four kilns were discovered (McCown 1947, 258, figs. 52b, 60; Zorn 1993b, 363–365; 1998, figs. 1–2). These include one oval kiln dating from Iron Age IIA, and three Iron Age IIB-Persian period kilns placed over the gate area. A potter's wheel was also discovered. For instance, Amihai Mazar noted that the Khirbet Marjamah (a site somewhat northeast of the Bethel hills) pottery (fig. 2)

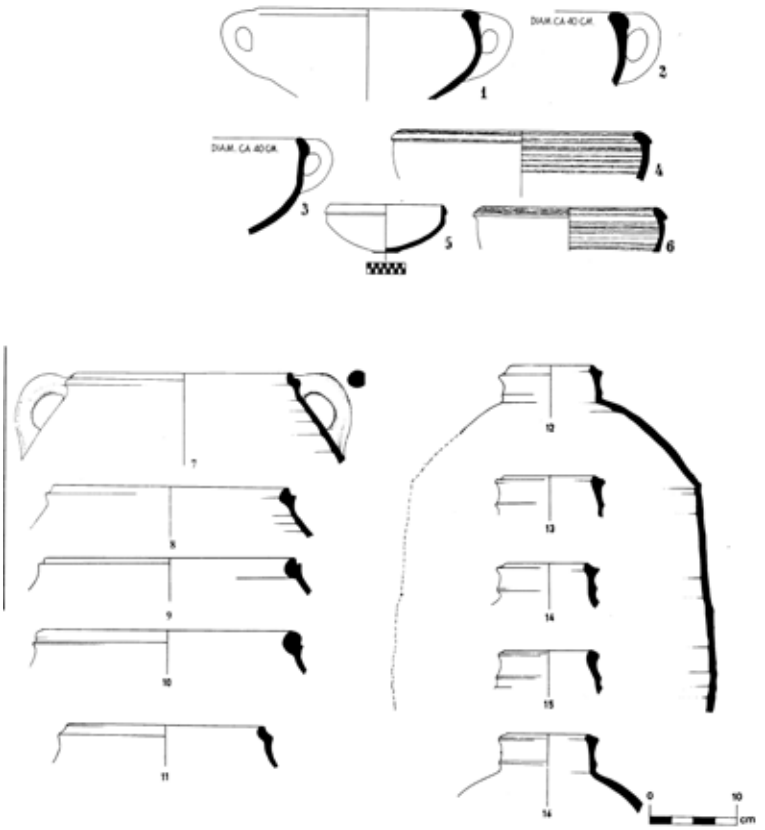


Figure 2: Iron Age II Pottery from Bethel (Nos. 1-6; after Kelso 1968, pl. 62) and Khirbet Marjamah (Nos. 7–16; after Mazar 1995, pl. 20)

has many resemblances to that of Judah, while bearing 'northern' characteristics as well (Mazar 1995, 114); yet no petrographic analysis has been undertaken to examine where the pottery was produced.

At Tell el–Far'ah North, Alain Chambon has redated the stratigraphic sequence of De-Voux (Chambon 1984), while Finkelstein further redated it (Finkelstein 2013, Table 2). This site is located in the northern part of the region, north of Shechem. The pottery forms (fig. 3) show more similarities to forms from Megiddo and the Jezreel and Beth Shean Valleys, including 'Hippo jars' (fig. 3: 8; Chambon 1984, pl. 45: 4–6), and

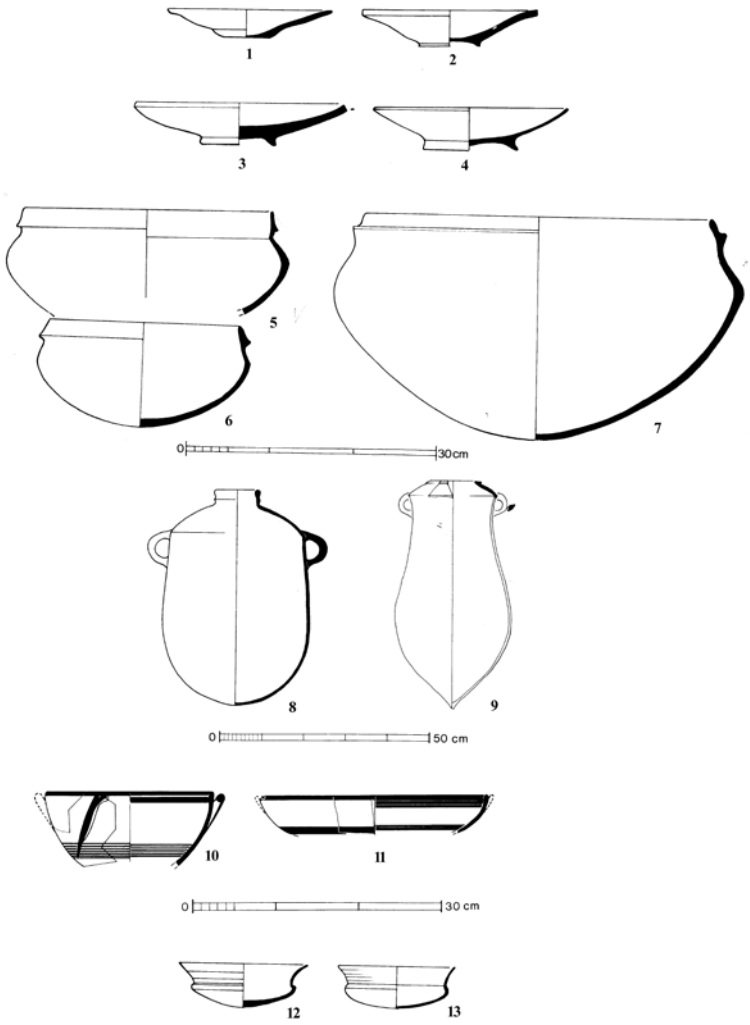


Figure 3: Iron Age II Pottery from Tell el-Far'ah North (after Chambon 1984, pl. 45, 52, 57, 61, 62).

decorated pottery. During the 9th-8th centuries BCE, imported forms appear in considerable quantities, such as Cypro-Phoenician pottery (fig. 3: 10–11; Chambon 1984, pl. 62), and Phoenician transport jars (fig. 3: 9; Chambon 1984, pl. 45: 23). Assyrian-style vessels also appear (fig. 3: 12–13; Chambon 1984, pl. 61: 1–18)(Periods VIId-e). Samaria ware bowls also appear (fig. 3: 1–4). Regarding the 'Hippo jars', it has been suggested that many of them had a central production center, and those appearing at Tell el-Far'ah or the Samaria hills were made differently from those of the northern valleys (Gal & Alexandre 2000, 45–47; Aznar 2005, 49).[4]

At Samaria, a large pottery assemblage was recovered (fig. 4; Crowfoot et al. 1957), yet, the contextual details are often unclear or arguable

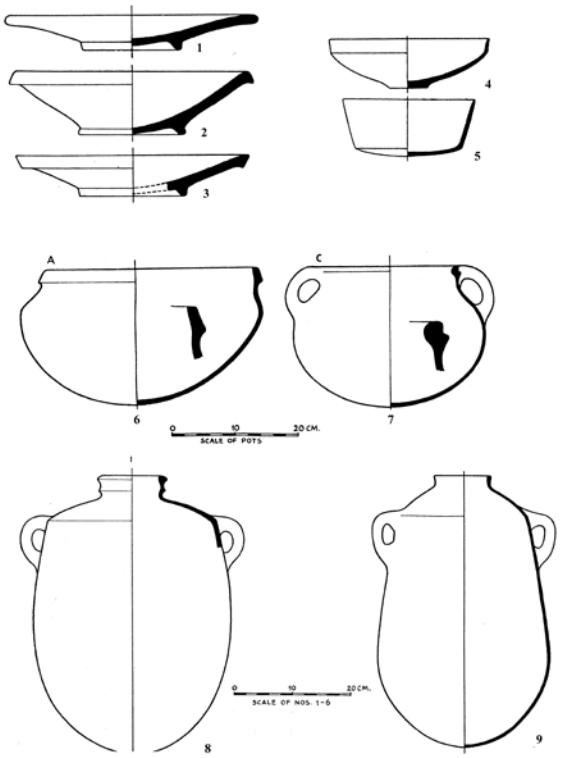


Figure 4: Iron Age II Pottery from Samaria (after Crowfoot et al. 1957, figs. 4, 13, 21, 30).

4 A recent study on the 'Hippo Jars' was conducted by Ortal Harush (2016), in which several jars of this type from the Beth Shean Valley were analyzed petrographically by the author.

(e.g. Tappy 1992, 60–137; 2001, 66–107, 265–340, 612–616). Again, we can see a large assemblage of imported forms and wares. Another type, defined as 'Samaria Ware Bowls' (fig. 4: 1–3), common at Samaria, yet supposedly imported from Phoenicia (Bikai 1978, 355; Aznar 2005, 100). Some compositional analysis was carried out by Carolina Aznar (2005), but only on a limited assemblage. It is still unclear to what extent the vessels or the styles (in particular Phoenician) were imported to Israel's capital city (e.g. two 'Samaria Ware' bowls analyzed from Jerusalem were found to be local to the central hills; Ben-Shlomo & Mommsen forthcoming). The ivories found in Samaria also show Phoenician influence (see e.g. Barnett 1982, 49).

Discussion and Potential for Future Compositional Studies

As noted, pottery from Iron II sites in the Samaria hills has not been studied in much depth, and we do not know the degrees of uniformity of raw materials, forms, and technology and to what extent external influences or trade are evident. The hierarchy and interconnections between the administrative centers and other sites, as well as their connections with the agricultural hinterland have only been studied so far in a general manner (e.g. Finkelstein 2013). In particular, the relationship between pottery, its production and distribution, both imported and local, and the administrative system of the Israelite Kingdom has not been examined in depth.

Aznar's work (2005) attempted to address some of these questions, yet, her work is only focused on the limited number of samples and array of types (mainly Hippo and Phoenician jars and Samaria Ware bowls) and also did not examine the smaller sites in the Samaria hills (since the work is not focused on this region). It is now suggested that this topic be further studied with large-scale use of compositional analysis. The research objectives are as follows: to define petrographic and chemical fingerprints of Samaria and its different sub- regions and specific important Iron Age sites. This will be a significant new addition to the petrographic and chemical 'mapping' of the southern Levant of a previously hardly studied region in this aspect.

The pottery technology, production modes and regional contacts as reflected by pottery during the Iron Age in the Samaria hills will be examined. In particular 'capital' city sites (as Samaria, Tel el-Far'ah (N)) with other administrative centers and smaller sites (such as Marjameh

and Bethel) will be compared. By analyzing pottery from several major Iron Age II administrative centers, as well as smaller sites, insights into intra- and inter-regional trade and cultural relations of the kingdom of Israel will be obtained. These will accordingly reflect different degrees of surplus accumulation, administrative activity and links with other sites and regions. Diachronic changes in both pottery production modes and intra- and inter-regional trade and cultural relations of the region throughout the Iron Age (Iron Age I, IIA, IIB, IIC), can also be examined and compared with those in the region of Jerusalem and Judah. The affiliation of the border region of the Bethel hills (or 'Benjamin'), whether to the northern or the southern polity throughout the stages of the Iron Age is another question.[5] This may be reflected by pottery vessels coming from either of these regions in larger quantities. Also, they may provide information about the nature of the administration of Samaria during the 9th and then 8th centuries BCE.

Pottery is an important indicator for trade and inter- and intra-regional connections (e.g. cultural influence, trade, tax collection) and relationships. The pottery production modes can further indicate aspects of centralization of the administration (e.g. Mommsen et al. 1984; Goren 1996; Goren et al. 2004; Mountjoy & Mommsen 2015). Greater knowledge of the nature of the economic and administration system of the Israelite kingdom will be achieved by the analysis of the sources of the common pottery, containers and imports, and could be thence compared with other regional polities in the Iron Age such as Judah, Philistia and Phoenicia. This knowledge will be obtained by compositional analysis.

Generally, the evidence in inter- and intra-regional trade in vessels and commodities can be evaluated for the different periods of the Iron Age according to the analysis of the storage and transport jars. The incidence of containers from the northern valleys, the south or other regions may indicate trade from these areas, and its extent; other more intra-regional movement of storage vessels may also indicate tax collection and/or redistribution of goods by the administrative centers. Any pattern of change during the different Iron Age phases, between the usage of different clay sources, differences between the major sites, and the number of production centers or production lines inferred from

5 Note, also that lamelech stamped jar handles, common in Judah, appear in certain quantities in this region, up to Bethel, and not in Samaria region 'proper' (Lipschits et al. 2011, 22–23, Table 2, fig. 1).

this usage, can be 'plotted' against different existing research models regarding the administrative and political character and importance of Samaria and other administrative centers in these periods.

The main aspect of the study of the pottery will be based on compositional analysis, comprising of both petrographic and chemical analyses. Petrographic section analysis (TSPA) has been used to study provenance and technology of ancient pottery vessels for over 70 years (see e.g. Whitbread 2001; Quinn 2013). This field is constantly developing. In particular, large groups of pottery of common types appearing in a relatively homogenized fabric can be considered as representing the local production centers (as long as the geological properties of their contents fit the local geology). Various aspects of ceramic pottery technology, such as tempering, levigation, clay mixing and firing temperature, can also be examined and evaluated according to the appearance of the clay and inclusions under the polarizing microscope (see e.g. Quinn 2013, 153–202). In addition, it aims to perform chemical analysis of a selection of vessels and soil samples (by Neutron Activation Analysis and X-Ray Fluorescence), in order to further clarify and define the compositional profiles of the region, and identify the geographical provenance of some of the imported pottery. The identification and analysis of soils in the Samaria region that could have been used for pottery production is especially important, due to the geological variability between certain sub-regions of this area (see above).

Only few technological and provenance studies have been conducted so far on Iron Age (or any other period) pottery from the Samaria hills. A very basic spectrographic and petrographic study of mostly late pottery was published in the Samaria reports (Crowfoot et al. 1957, 471–477). A relative large petrographic study (109 samples) was performed on Middle Bronze Age IIB-C, Late Bronze Age and Iron Age I pottery from Shiloh (Glass et al. 1993). In addition, a micromorphological study was carried out on the MB glacis, a study that can help define local soils and sediments (Lavee et al. 1993). The emphasis of that petrographic study was Iron I, with the analysis of 48 collared rimmed pithoi; they were made of both lower cretaceous and calcareous clay groups (Glass et al. 1993, 279–282). These two groups coincided with two chrono-typological groups of the collared rimmed pithoi at the site. The conclusion was that these vessels had a special production center perhaps north of Shiloh, and not all were locally produced (Glass et al

1993, 279–282; Finkelstein 2013, 26). Therefore the site may have been an administrative center collecting and possibly redistributing produce from other sites in the region. Other pottery types from Shiloh were made of Moẓa-Aminadav, terra rossa and lower cretaceous clay types; vessels from Moza-Aminadav clay were mostly from the Bronze Age, and apparently this clay was hardly used in Iron I.

Other smaller provenance studies include pottery from Tel Dothan (Master et al. 2005, 76, 77, 114), thirteen 'wedged' bowls mostly from survey sites (Itach et al. 2017), an NAA analysis of Philistine ware from Tell en-Naṣbeh (Gunneweg et al. 1994) and analysis of several cuneiform tablets provenanced to Shechem (Goren et al. 2004, 262–265). Some Iron I pottery from Khirbet Raddana was analyzed by Yuval Goren (Lederman, personal communication) but there is no detailed publication of the results. A few 'Samaria ware bowls' from Samaria and Tell Farah analyzed by Aznar were apparently made out of Neogene marl clay from the Phoenician coast (Aznar 2005, 129).[6] These studies are very limited in their scope and only relate to a few pottery types. Results show most examples analyzed were made of terra rossa or lower cretaceous related soils.

Three main groups of pottery vessels will be studied in particular. A selection of most common table ware forms as bowls, kraters, jugs, juglets etc.; Cooking vessels; Storage jars (of common and foreign forms and of different types and sizes). The first group generally represents the regular local pottery tradition and production; imported table ware usually represents cultural or economic interaction with other regions. Cooking vessels are known to have a specific clay recipe and production techniques, due to their need for high-temperature and thermal shock resistivity (e.g. Miére & Picon 2003; Ben-Shlomo et al. 2008). These may have been produced in different specialized workshops. The production mode (i.e. more centralized) of the cooking pots, as evidenced from the domestic repertoire, can indicate socio-economic developments. The composition and provenance of storage vessels can reflect patterns in commodity trade, exchange, and possibly redistribution of goods and tax collection. An example of such compositional results comes from the Shiloh pithoi (Glass et al. 1993).

6 Other petrographic studies include 22 Bullae from 4th century Wadi ed-Daliyeh or Samaria analyzed by TSPA (Gurwin et al. 2015).

The results of the compositional analysis are expected to provide well-defined local fabrics for table ware and cooking vessels, as well as some of the jars. So far, according to limited petrographic analysis (mostly Shiloh; Glass et al. 1993) at least three major clay types are known to have been used for pottery during the Iron Age (see above). With further possible aid of a study and analysis of soil samples in the region, the sources will be linked to more specific sub-regions or sites. In particular, the sources from the Samaria region may be now distinguished by various petrographic aspects from other similar clays in the central hilly region as the Jerusalem and Hebron regions (for instance by the various quantities and types of various calcareous inclusions, the appearance and preservation degree of the dolomite crystals, etc.).

Recently, a large scale TSPA and NAA study was conducted on the Iron Age pottery of Jerusalem (Ben-Shlomo 2016; Ben-Shlomo & Mommsen forthcoming). The results define more clearly the pottery production and clay sources of the Jerusalem region. This study, together with petrographic studies on the pottery from Tel Hebron (Ben-Shlomo 2017; Shapiro forthcoming) and Tel Moẓa (Ben-Shlomo & Mommsen forthcoming) covers many of the sources from Judah. These results indicate that Jerusalem did not collect containers from distant regions but rather from the nearby agricultural hinterland of the town. The question is whether a similar phenomenon will be witnessed in Samaria, or the pottery will reflect wider contacts. Previously, it was suggested that at least according to the Samaria ostraca, the tax-administration of the kingdom of Israel was not well-developed and was based on clan-relationships (Niemann 2008). Apparently, hardly any pottery produced in the Samaria hills (or the area of the kingdom of Israel) was imported to Jerusalem either during Iron I or II. The new results may shed light on the differences between the nature of administration at the Israelite and Judahite polities. Hopefully such a study can shed much light on the administrative hierarchy and extent of commercial activity of the Kingdom of Israel in the Samaria Hills during the 10th to the 8th centuries BCE. The Samaria hills pottery can be compared to these regions in order to evaluate possible trade contacts, cultural influences and possible commodity taxation.

Summary

A substantial number of the important sites related to the Iron Age Kingdom of Israel have been excavated, while the finds of several have also been published in detail. In addition, much data is available from regional surveys. However, a comprehensive typological and technological study of the pottery assemblages has not been conducted. A partial reason for this might be that most of these excavations were conducted at least 70 years ago.

This short survey suggests that a new and comprehensive typological, technological and compositional study of Iron Age II from the Samaria region, combining petrography and chemical analysis, could shed new light on the development of the administration of the kingdom of Israel between the 10th and 8th centuries BCE. The relationship between major and minor administrative centers might also be elucidated by tracking the source of the pottery in these various sites. Another important aspect of material culture that can benefit directly from the study of the pottery and its composition are the intra- and inter-regional trade contacts and patterns.

Bibliography

Aharoni 1979:
Aharoni, Y., 1979, *The Land of the Bible: A Historical Geography* (2nd revised ed.), Rainey, A.F. (editing & translation), London.

Albright 1924:
Albright, W.F., 1924, *Excavations and Results at Tell el-Fûl (Gibeah of Saul)*, New Haven.

Albright 1935:
Albright, W.F., 1935, *The Archaeology of Palestine and the Bible* (3rd edition), New York.

Alt 1925:
Alt, A., 1925, *Die Landnahme der Israeliten in Palästina: Territorialgeschichtliche Studien*, Leipzig.

Aznar 2005:
Aznar, C.A., 2005, *Exchange Networks in the Southern Levant during the Iron Age II: A Study of Pottery Origin and Distribution*, Ph.D. dissertation, Cambridge.

Bar & Zertal 2016:
Bar, S. & Zertal, A., 2016, *The Manasseh Hill Country Survey, vol. VI: The Eastern Samarian Shoulder from Nahal Tirza to Ma'ale Ephraim Junction*, Haifa (Hebrew).

Barnett 1982:
Barnett, R.D., 1982, *Ancient Ivories in the Middle East*, Jerusalem.

Ben-Shlomo 2016:
Ben-Shlomo, D., 2016, Pottery Production in Iron Age Jerusalem: A Diachronic Study, *Lecture given at the 10th ICAANE conference*, Vienna (April 24–29, 2016).

Ben-Shlomo 2017:
Ben-Shlomo, D., 2017, Petrographic Analysis of Iron Age and Early Roman Pottery, in: Eisenberg, E. & Ben-Shlomo, D. (editors), *Tel Hebron 2014 Excavations, Final Report*, Ariel, pp. 335–347.

Ben-Shlomo & Mommsen forthcoming:
Ben-Shlomo, D. & Mommsen, H., Forthcoming, Pottery Production in Iron Age Jerusalem: A New Compositional Profiling, *Geoarchaeology* 33.

Ben-Shlomo et al. 2008:
Ben-Shlomo, D., Shai, I., Zukerman, A., & Maeir, A.M., 2008, Cooking Identities: Aegean-Style Cooking Jugs in the Southern Levant, *American Journal of Archaeology* 112, pp. 225–246.

Bikai 1978:
Bikai, P.M., 1978, *The Pottery of Tyre*, Warminster.

Bothmer 1941:
Bothmer, D. von, 1941, Greek Pottery from Tell en-Naṣbeh, *Bulletin of the American School of Oriental Research* 83, pp. 25–30.

Brody 2014a:
Brody, A., 2014, Interregional Interaction in the Late Iron Age: Phoenician and Other Foreign Goods from Tell en-Naṣbeh, in: Spencer, J.R., Mullins, R.A. & Brody, A.J. (editors), *Material Culture Matters - Essays on the Archaeology of the Southern Levant in Honor of Seymour Gitin*, Winona Lake, pp. 53–67.

Brody 2014b:
Brody, A.J., 2014, Transjordanian Commerce with Northern Judah in the Iron Age II-Persian Period: Ceramic Indicators, Interregional Interaction, and Modes of Exchange at Tell en-Naṣbeh, in: Zorn, J.R. & Brody, A.J. (editors), *"As for me, I will dwell at Mizpah...": The Tell en-Naṣbeh Excavations After 85 Years*, Piscataway, pp. 59–93.

Broshi 1974:
Broshi, M., 1974, The Expansion of Jerusalem in the Reigns of Hezekiah and Manasseh, *Israel Exploration Journal* 24, pp. 21–26.

Broshi & Finkelstein 1992:
Broshi, M. & Finkelstein, I., 1992, The Population of Palestine in Iron Age II, *Bulletin of the American School for Oriental Research* 287, pp. 47–60.

Bunimovitz & Finkelstein 1993:
Bunimovitz, S. & Finkelstein, I., 1993, Pottery, in: Finkelstein, I., Bunimovitz, S. & Lederman, Z. (editors), *Shiloh: The Archaeology of a Biblical Site,* Tel Aviv, pp. 81–196.

Callaway 1976:
Callaway, J.A., 1976, Excavating Ai (et-Tell): 1964–1972, *Biblical Archaeology* 39, pp. 18–30.

Callaway & Cooley 1971:
Callaway, J.A. & Cooley, R.E., 1971, A Salvage Excavation at Raddana, in Bireh, *Bulletin of the American School of Oriental Research* 201, pp. 9–19.

Campbell 2002:
Campbell, E.F. (editor), 2002, *Shechem III: The Stratigraphy and Architecture of Shechem/Tell Balâṭah, vol. 1: Text*, Ann Arbor.

Chambon 1984:
Chambon, A., 1984, *Tell el-Farʿah I: L'âge du fer*, Paris.

Crowfoot et al. 1942:
Crowfoot, J.W., Kenyon, K.M. & Sukenik, E.L., 1942, *Samaria-Sebaste: Reports of the Work of the Joint Expedition in 1931-1933 and of the British Expedition in 1935, vol. 1: The Buildings at Samaria*, London.

Crowfoot et al. 1957:
Crowfoot, J.W., Crowfoot, G.M. & Kenyon, K.M., 1957, *Samaria-Sebaste: Reports of the Work of the Joint Expedition in 1931-1933 and of the British Expedition in 1935, vol. III: The Objects*, London.

Finkelstein 1988:
Finkelstein, I., 1988, *The Archaeology of the Israelite Settlement*, Saltz, D. (translation), Jerusalem.

Finkelstein 1990:
Finkelstein, I., 1990, Excavations at Kh. ed-Dawwara: An Iron Age Site Northeast of Jerusalem, *Tel Aviv* 17, pp. 163–209.

Finkelstein 1994:
Finkelstein, I., 1994, The emergence of Israel: A Phase in the Cyclic History of Canaan in the Third and Second Millennia BC, in: Na'aman, N. & Finkelstein, I. (editors), *From Nomadism to Monarchy: Archaeological and Historical Aspects of Early Israel*, Jerusalem, pp. 150–178.

Finkelstein 1999:
Finkelstein, I., 1999, State Formation in Israel and Judah: A Contrast in Context, A Contrast in Trajectory, *Near Eastern Archaeology* 62, pp. 35–52.

Finkelstein 2011:
Finkelstein, I., 2011, Observations on the Layout of Iron Age Samaria, *Tel Aviv* 38, pp. 194–207.

Finkelstein 2012:
Finkelstein, I., 2012, Tell el-Far'ah (Tirzah) and the Early Days of the Northern Kingdom, *Revue Biblique* 119, pp. 331–346.

Finkelstein 2013:
Finkelstein, I., 2013, *The Forgotten Kingdom: The Archaeology and History of Northern Israel*, Atlanta.

Finkelstein et al. 1993:
Finkelstein, I., Bunimovitz, S. & Lederman, Z. (editors), 1993, *Shiloh: The Archaeology of a Biblical Site,* Tel Aviv.

Finkelstein et al. 1997:
Finkelstein, I., Lederman, Z. & Bunimovitz, S., 1997, *Highlands of Many Cultures – The Southern Samaria Survey, The Sites*, Tel Aviv.

Finkelstein & Singer-Avitz 2009:
Finkelstein, I. & Singer-Avitz, L., 2009, Reevaluating Bethel, *Zeitschrift des Deutschen Palästina-Vereins* 125, pp. 33–48.

Gal & Alexandre 2000:
Gal, Z. & Alexandre, Y., 2000, *Horbat Rosh Zayit, An Iron Age Storage Fort and Village*, Jerusalem.

Garfinkel et al. 2016:
Garfinkel, Y., Kreimerman, I. & Zilberg, P., 2016, *Debating Khirbet Qeiyafa: A Fortified City in Judah from the Time of King David*, Jerusalem.

Glass et al. 1993:
Glass, J., Goren, Y., Bunimovitz, S. & Finkelstein, I., 1993. Petrographic Analysis of Middle Bronze Age III, Late Bronze Age and Iron Age I Ceramic Assemblages, in: Finkelstein, I., Bunimovitz, S. & Lederman, Z. (editors), *Shiloh: The Archaeology of a Biblical Site,* Tel Aviv, pp. 271–286.

Goren 1996:
Goren, Y., 1996, The Southern Levant in the Early Bronze Age IV: The Petrographic Perspective, *Bulletin of the American Schools of Oriental Research* 303, pp. 33–72.

Goren et al. 2004:
Goren, Y., Finkelstein, I. & Na'aman, N., 2004, *Inscribed in Clay: Provenance Study of the Amarna Tablets and Other Ancient Near Eastern Texts*. Tel Aviv.

Gottwald 1985:
Gottwald, N.K., 1985, The Israelite Settlement as a Social Revolutionary Movement, in: Amitai, J. (editor), *Biblical Archaeology Today - Proceedings of the International Congress on Biblical Archaeology, Jerusalem, April 1984*, Jerusalem, pp. 34–46.

Gunneweg et al. 1994:
Gunneweg, J., Asaro, F., Michel, H.V. & Perlman, I., 1994, Interregional Contacts between Tell en-Naṣbeh and Littoral Philistine Centers in Canaan During Early Iron Age I, *Archaeometry* 36, pp. 227–239.

Gurwin et al. 2015:
Gurwin, S., Goren, Y. & Lipschits, O., 2015, Structural, Technical and Petrographic Analysis of Bullae from the Samaria Papyri, *Tel Aviv* 42, pp. 89–102.

Harel & Nir 1984:
Harel, M. & Nir, D., 1984, *The Geography of the Land of Israel* (new ed.), Jerusalem (Hebrew).

Harush 2016:
Harush, O., 2016, *Regional, Chronological, Typological and Technological Aspects of 'Hippo' Jars from North Israel in the Iron Age IIa.* Unpublished M.A. Thesis, Jerusalem.

Holladay 1990:
Holladay, J.S., 1990, Red Slip, Burnish and the Solomonic Gateway at Gezer, *Bulletin of the American Schools of Oriental Research* 277/278, pp. 23–70.

Horowitz 1997:
Horowitz, A., 1997, Geology and Hydrology, in: Finkelstein, I. & Lederman, Z. (editors), *Highlands of Many Cultures: The Southern Samaria Survey, The Sites*, vol. I, Tel Aviv, pp. 73–84.

Itach et al. 2017:
Itach, G., Aster, Sh.Z. & Ben-Shlomo, D., 2017, The Wedge-Impressed Bowl and the Assyrian Deportation, *Tel Aviv* 44, pp. 72–97.

Kelso 1968:
Kelso, J.L., 1968, *The Excavation of Bethel (1934–1960)*, Cambridge.

Lavee et al. 1993:
Lavee, H., Weider, M. & Finkkelstein, I., 1993, Micromorphological Investigation of the Middle Bronze Age Glacis, in: Finkelstein, I., Bunimovitz, S. & Lederman, Z. (editors), *Shiloh: The Archaeology of a Biblical Site*, Tel Aviv, pp. 294–302.

Lederman 1999:
Lederman, Z., 1999, *An Early Iron Age Village at Khirbet Raddana: The Excavations of Joseph A. Callaway*, Ph.D. dissertation, Ann Arbor.

Lipschits et al. 2011:
Lipschits, O., Sergi, O. & Koch, I., 2011, Judahite Stamped and Incised Jar Handles: A Tool for Studying the History of Late Monarchic Judah, *Tel Aviv* 38, pp. 5–41.

Magen & Finkelstein 1993:
Magen, Y. & Finkelstein, I., 1993, *Archaeological Survey of the Hill Country of Benjamin*, Jerusalem.

Master et al. 2005:
Master, D.M., Monson, J.M., Lass, E.H.E., & Pierce, G., 2005, *Tell Dothan, vol. I: Remains from the Tell (1953-1964)*, Winona Lake.

Mazar 1995:
Mazar, A., 1995, Excavations at the Israelite Town at Khirbet Marjamah in the Hills of Ephraim, *Israel Exploration Journal* 45, pp. 85–117.

McCown 1947:
McCown, C.C., 1947, *Tell en-Naṣbeh I: Archaeological and Historical Results*, Berkeley—New Haven.

Mendenhall 1962:
Mendenhall, M., 1962, The Hebrew Conquest of Palestine, *Biblical Archaeology* 25, pp. 62–87.

Miére & Picon 2003:
Miére, M. & Picon, M., 2003, Appearance and First Development of Cooking and "Non-Cooking" Ware Concepts in the Near East, in: Di Pierro, S., Serneels, V. & Maggetti, M. (editors), *Ceramic in the Society, Proceedings of the 6th European Meeting on Ancient Ceramics*, Fribourg, pp. 175–184.

Mommsen et al. 1984:
Mommsen, H., Perlman, I. & Yellin, J., 1984, The Provenience of the "lmlk" Jars, *Israel Exploration Journal* 34, pp. 89–113.

Mountjoy & Mommsen 2015:
Mountjoy, P. & Mommsen, H., 2015, Neutron Activation Analysis of Aegean-style IIIC Pottery from 11 Cypriot and Various Near Eastern Sites, *Egypt and the Levant* 25, pp. 421–508.

Na'aman 2009:
Na'aman, N., 2009, Saul, Benjamin and the Emergence of "Biblical Israel", *Zeitschrift für die Alttestamentliche Wissenschaft* 121, pp. 211–224, 335–349.

Na'aman 2014:
Na'aman, N., 2014, Dismissing the Myth of a Flood of Israelite Refugees in the Late Eighth Century BCE, *Zeitschrift für die Alttestamentliche Wissenschaft* 126, pp. 1–14.

Na'aman & Finkelstein 1994:
Na'aman, N. & Finkelstein, I., 1994, Introduction, in: Na'aman, N. & Finkelstein, I. (editors), *From Nomadism to Monarchy: Archaeological and Historical Aspects of Early Israel*, Jerusalem, pp. 9–17.

Na'aman & Zadok 2000:
Na'man, N. & Zadok, R., 2000, Assyrian Deportations to the Province of Samerina in the Light of Two Cuneiform Tablets from Tel Hadid, *Tel Aviv* 27, pp. 159–188.

Neimann 2008:
Niemann, H.M., 2008, A New Look at the Samaria Ostraca: The King-Clan Relationship, *Tel Aviv* 35, pp. 249-266.

Noth 1966:
Noth, M., 1966, *Das System de Zwölf Stämme Israels*, Darmstadt.

Oded 1979:
Oded, B., 1979, *Mass Deportations and Deportees in the Neo-Assyrian Empire*, Wiesbaden.

Pritchard 1962:
Pritchard, J.B., 1962, *Gibeon, Where the Sun Stood Still: The Discovery of the Biblical City*, Princeton.

Quinn 2013:
Quinn, P.S., 2013, *Ceramic Petrography: The Interpretation of Archaeological Pottery & Related Artefacts in Thin Section*, Oxford.

Reisner et al. 1924:
Reisner, G.A., Fisher, C.S. & Lyon, D.G., 1924, *Harvard Excavations at Samaria, 1908-1910*, Cambridge.

Sergi 2013:
Sergi, O., 2013, Judah's Expansion in Historical Context, *Tel Aviv* 40, pp. 226–246.

Sergi 2015:
Sergi, O., 2015, On the Emergence of Judah between Jerusalem and Benjamin, *New Studies in the Archaeology of Jerusalem and its Region* IX, pp. 50–73 (Hebrew).

Shapiro forthcoming:
Shapiro, A., Forthcoming, Petrographic Analysis of Selected Pottery from the Tel Hebron (1999) Excavations, in: Eisenberg, E. (editor), *The 1999 Excavations at Tel Hebron* (tentative title), Jerusalem.

Suriano 2016:
Suriano, M.J., 2016, Wine Shipments to Samaria from Royal Vineyards, *Tel Aviv* 43, pp. 99–110.

Tappy 1992:
Tappy, R.E., 1992, *The Archaeology of Israelite Samaria, vol. I: Early Iron Age through the Ninth Century BCE*, Atlanta.

Tappy 2001:
Tappy, R.E., 2001, *The Archaeology of Israelite Samaria, vol. II: The Eighth Century BCE*, Atlanta.

Tavger 2015:
Tavger, A. 2015, Elevation Point 914 East of Beitin and the Location of the Early Cultic Site of Bethel, *In the Highland's Depth* 5, pp. 49–70 (Hebrew).

Tavger et al. 2016:
Tavger, A., Uziel, J., Raviv, D. & Shai, I., 2016, Addressing Surveying Methodology in the Southern Levant, *The Bible and Interpretation* (June 2016). http://www.bibleinterp.com/articles/2016/06/tav408003.shtml [6.7.2016]

Wampler 1947:
Wampler, J.C., 1947, *Tell en-Naṣbeh Excavated under the Direction of the Late William Frederic Badè, vol. II: The Pottery*, Berkeley.

Whitbread 2001:
Whitbread, I.K., 2001, Ceramic Petrology, Clay Geochemistry and Ceramic Production – from Technology to the Mind of the Potter, in: Brothwell, D.R. & Pollard, A.M. (editors), *Handbook of Archaeological Sciences*, Chichester, pp. 449–458.

Zertal 1986:
Zertal, A., 1986, *The Israelite Settlement in the Hill-Country of Manasseh*, Ph.D. Dissertation, Tel Aviv.

Zertal 1994:
Zertal, A., 1994, "To the land of the Perizzites and the Giants"- On the Israelite Settlement in the Hill Country of Manasseh, in: Na'aman, N. & Finkelstein, I. (editors), *From Nomadism to Monarchy: Archaeological and Historical Aspects of Early Israel*, Jerusalem, pp. 47–69.

Zertal 2004:
Zertal, A., 2004, *The Manasseh Hill Country Survey, vol. 1: The Shechem Syncline*, Leiden.

Zertal 2008:
Zertal, A., 2008, *The Manasseh Hill Country Survey, vol. 2: The Eastern Valleys and the Fringes of the Desert*, Leiden.

Zertal 2012:
Zertal, A., 2012, *The Manasseh Hill Country Survey, vol. V: The Middle Jordan Valley (from Wadi Fasael to Wadi 'Auja)*, Haifa (Hebrew).

Zertal & Bar 2017:
Zertal, A. & Bar, S., 2017, *The Manasseh Hill Country Survey, vol. 4: From Nahal Bezeq to the Sartaba*, Leiden.

Zertal & Mirkam 2016:
Zertal, A. & Mirkam, N., 2016, *The Manasseh Hill Country Survey, vol. 3: From Nahal 'Iron to Nahal Schechem*, Leiden.

Zorn 1993a:
Zorn, J.F., 1993, Mesopotamian-Style Ceramic 'Bathtub' Coffins from Tell en-Naṣbeh, *Tel Aviv* 22, pp. 216–224.

Zorn 1993b:
Zorn, J.F., 1993, *Tell en-Naṣbeh: A Re-evaluation of the Architecture and Stratigraphy of the Early Bronze Age, Iron Age and Later Periods*, Ph.D. Dissertation, Ann Arbor.

Zorn 1998:
Zorn, J.F., 1998, The Dating of the Early Iron Age Kiln from Tell al-Nasbah, *Levant* 30, pp. 199–202.

Maps

Ariel Map:
Sneh, A., & Shaliv, G., 2012, *Geological Map of Israel - Ariel Sheet 8-II*, 1:50,000, Jerusalem.

Ramallah Map:
Shachnai, E., 2000, *Geological Map of Israel - Ramallah Sheet 8-IV*, 1:50,000, Jerusalem.

Shekhem Map:
Cook, P., 2000, *Geological Map of Israel - Shekhem Sheet 5-IV*, 1:50,000, Jerusalem.