

ARCHAEOLOGICAL PERIODIZATION VS ABSOLUTE CHRONOLOGY:
WHAT DOES NOT WORK WITH HIGH AND LOW
EARLY BRONZE AGE IN SOUTHERN LEVANT

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The comparison of two sites of Tell es-Sultan and Tall al-Ḥammām, facing each other on the opposite sides of the Jordan, needs a reliable cultural and chronological correlation. Something which has been pursued by archaeologists with different methods and approaches: synchronization in time and culture is never easy. This leads to the issue of relative and absolute chronology. A recent re-assessment of Early Bronze Age absolute chronology of Syria-Palestine, stemmed from a re-examination of available radiocarbon datings and from stratigraphic inter-sites correlations, poses more problems than it solves. There is a basic problem of method: to keep stratigraphy, periodization, absolute dating and cultural interpretation separated. It often happens that the latter is confused with periodization. This has deeply-rooted reasons, but it is time for archaeology to introduce a tool to distinguish periods - that are time quantities - from cultural horizons; this tool is here defined as “cultural genome”. The sequence of Tell es-Sultan, for its completeness, spatial and chronological extension and rate of publication, can be used as a reference for the whole Early Bronze Age in Southern Levant. This paper suggests how to use it.

Keywords: chronology; Jericho; Early Bronze Age; Egypt; urbanization

1. PREMISE

In order to accomplish a reliable comparison between Tell es-Sultan/Jericho and Tall al-Ḥammām during the Early Bronze Age, some methodological issue have to be established, and, first of all, a shared periodization and chronology. This point is of a certain interest because periodization is tested here in a practical case to interconnect two sites and to compare their archaeological stages through time.

Tell es-Sultan has been excavated for more than one century, while Tall al-Ḥammām, except for some soundings in the '80s of the last century, is a relatively new excavation. This has several outcomes in the possibility of setting and decanting data, and refining interpretations. Tell es-Sultan has a prominent Neolithic occupation, which is apparently missing in Tall al-Ḥammām. Such prehistoric premises played an important role in the site long-duration development as human settlement¹.

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¹ Some of the most remarkable features of the Neolithic settlement at Jericho have been recently analyzed in Nigro 2017a.

A valid archaeological comparison needs good stratigraphies (and both sites are provided) and a clear periodization, possibly anchored to absolute chronology, to support material culture connections within reliable temporal links.

For this reason, a summary of archaeological periodization in Southern Levant during the Early Bronze Age is offered in this paper to set the ground of our comparison.

2. ARCHAEOLOGICAL PERIODIZATION AND ITS THEORETICAL BASIS

Archaeological periodization is based upon comparison of material remains. It is surmised that similar diagnostic artifacts are more or less contemporaneous and that an overall material/immaterial horizon referable to a human community/society - a system including ideology, economy, architecture, landscape, technology, social organization and customs etc. - as (and if) reflected by archaeology (decayed remains buried into the ground) can represent a cultural facies (= horizon). The association of each horizon with a time span, and its transformation into a stage, a phase of even a period is a further step, very problematic. In the words of one of the most eminent archaeologists of the ancient Near East, Henri Frankfort (1932, 2):

«We have started with the assumption that similar groups of remains found at different places are roughly contemporaneous. This is by no means always true; but the degree of probability increases in exact proportion to the number, complexity, and completeness of the similarities.»

Such heuristic abstraction, when touched by the idea of human progress, may suggest an implicit evolutionary conception of history, consisting of subsequent stages/periods/epochs. This is, however, unnecessary: distinguished periods may mark different cultural facies and phenomena, alternating growth and success to demise and crisis, or simply horizons with different features and technical or cultural achievements.

2.1. Archaeo-memes, material cultural horizons and the dangerous task of correlation

A material set of finds (and the immaterial cultural heritage which they reflect) may be conceptualized as composed by a coherent network of interrelated archaeo-memes, representing what may be labelled as the “cultural genome” of a past community or society, something which encompasses all human activities and creations, material and immaterial. The concept of “cultural genome” seems useful as it is more alien to be inappropriately transformed into a time marking one (a period). Cultural horizons or genomes are not branches of time, as time is relative and curves in archaeology too, so that different cultural genomes, even descending one from another, may coexist.

Archaeo-memes and cultural-genomes are transmitted through imitation and education and form the core of the cultural identity of a community. They overlap, influence each other, merge, and generate more complex cultural landscapes which we label as “cultural horizons”.

Nonetheless, it is a specific task of the archaeologist to scientifically define such horizons in space and time through periodization and chronology. The earliest stages of history are labelled after the original Greek historical thought as the Stone, Bronze and Iron Ages, further on sub-divided into sub-periods (Paleolithic, Neolithic, etc.) or site-named cultures (e.g. “Sultanian”). This seems a very rough and arbitrary attempt to reduce history and its materiality into manageable tools with an innate and implicit idea of evolutionary progress.

The temporal dimension in archaeology has been reduced to a relative sequence of detectable punctual events. Time is a mound (or a section) of superimposed strata transcribed as a matrix of layers crystallized in a readable stratigraphy, which is reliable only in its internal reference system. To anchor this site-specific sequence to a more general periodization is one of the most hazardous challenges of archaeology.

While the basic rule of stratigraphy is self-evident (each stratum and its content is older than layers overlaying or cutting it), how to group layers in phases, and phases into periods, keeping a reliable internal consistency, is another crucial task for the archaeologist. Stratigraphic periodization thus starts from each individual excavation and it is built up matching data collected first in a single archaeological site and then in interrelated ones. Inter-site sequence, then, has to be connected to the regional and extra-regional periodization, again by matching finds and stratigraphies, with the adjunctive and decisive help of absolute chronology. It is a very hard task, especially because what we get of the buried past is often a pale, worn-out fragment.

2.2. Regional periodizations in pre-classical Levant

Regional periodizations of the ancient Near East and Mediterranean have been systematized through one century and a half of archaeological research. They often do not fit together, especially when - and it is hard to admit - absolute chronology is called into play. For this reason, some major research projects have been dedicated to cultural and chronological synchronization, the most famous of which are Manfred Bietak’s SCIEM 2000², funded by the Austrian Academy of Science, and the ARCANE Project³, funded by the European Science Foundation, focused on the 3rd millennium BC. They could not bring to a generally accepted periodization, although they (re-)introduced some basic working tools: the notion of “key-site”, i.e. a place which for its history, continuity in occupation, central location, and wide and reliable exploration, can provide a deep diachronic insight⁴; the identification of “first appearance” of diagnostic items or customs (archaeo-memes), i.e. the earliest attestation of tools and features typical of a distinguished cultural stage; the chronological potential of “cultural horizons”. Notwithstanding the high

² Bietak ed. 2000; 2003; Bietak - Czerny eds. 2007.

³ [Http://www.arcane.uni-tuebingen.de](http://www.arcane.uni-tuebingen.de).

⁴ The accountability and availability of data rely upon the objective value of the site (which in the last issue descends from its own very history), and the capabilities and means of the archaeologists who excavated and published it.

methodological attainment, such projects could not avoid circular reasoning already present in their original dataset, i.e. archaeological reports. Moreover, they often confused “cultural horizons” with “periods”.

Correlation between different sites to build a regional periodization is a multi-factorial very complex endeavor, which often includes a full re-evaluation and assessment of the archaeological record. It needs full information about contexts and a powerful computer aided statistical approach to handle the big-data generated by material archaeology. At the end, its reliability remains very weak, and the help of absolute chronology seems necessary.

3. PERIODIZATION *VS* HISTORICAL INTERPRETATION: A VICHIAN PERSPECTIVE

Archaeological periodization has been intermingled with historical interpretation since the beginning, and circular reasoning, thus, became quite usual in literature⁵. Cultural facies and stratigraphic periods started to be confused with historical eras, marking naissance, flourish and demise of any culture, in a sort of Vichian historical mechanism. This also applies to the Bronze Age of the Levant. The Early Bronze Age was the epoch when the city first appeared in the Levant: the premise of urbanism is the EB IA, its progressive rise is EB IB and EB II, the urban flourish the EB IIIA, and the gradual demise and final dramatic collapse the EB IIIB. The urban system in Southern Levant was typically conceived and narrated as a cyclical historical phenomenon according to the model: incipency, rise, flourish, collapse, followed by a recovery in the Middle Bronze and so on. This narration was set forth by Pierre de Miroschedji during the Emmaus Conference of 1986⁶: his paper (and several others in the following decades on the same topic⁷) exactly illustrated the phenomenon in this way, including the deriving sinusoidal graph of the urban civilization⁸. As it regards the causes of such a progressive and pre-determined historical parable⁹, they were time by time identified with Egyptian foreign policy¹⁰, internal riots¹¹, foreigner attacks¹² or

⁵ Theoretically, archaeological periodization descends from compared stratigraphies and material culture sequences, and its connection to evenemential history can be attempted only when precise chronological links are available (inscribed finds, radiocarbon datings).

⁶ de Miroschedji ed. 1989.

⁷ Richard 1987; Esse 1989; Joffe 1993; Finkelstein 1995; Nigro 1996-1997; Chesson - Philip 2003; Philip 2003; Savage - Falconer - Harrison 2007; Mazar - Rotem 2009; Harrison 2012, 630-638; Greenberg 2017.

⁸ de Miroschedji 2009, 115, fig. 6.

⁹ Nigro 2014a, 77-78.

¹⁰ Mazar 1968, 65-67; Callaway 1972, 306-307; 1978, 52-55; 1993, 44; Piacentini 1987; de Miroschedji 2012.

¹¹ Gallo 2014.

¹² Albright 1922, 125; 1926a, 251-253; 1926b, 266; Kenyon 1957, 186-200; 1966, 6-35; 1971, 135-136; Wright 1961, 103.

climate changes, the latter perhaps on more solid grounds as a major drought actually occurred towards 2200 BC/4200 BP¹³.

A similar narration of the Early Bronze Age history of (Syria-)Palestine very well fits what the eminent Neapolitan philosopher, Giovanbattista Vico (1668-1744) described in his work *The New Science, La Scienza Nuova* (Lit. “Principj di una Scienza Nuova intorno alla natura delle nazioni”, Naples 1725, which achieved a more complete and revised form in the third edition of 1744). Vico stressed the role of Humankind in making (lit. “creating”) its own history, and he proposed the vision labelled “*corsi e ricorsi*”, suggesting the tendency of history (or historiography?) to cyclically repeat itself. Such an epistemological approach deeply affects archaeological thought: we almost naturally expect a destruction or abandon at the end of what we stratigraphically define a period, and then a recovery. Moreover, Vico stressed the possibility of investigation human history starting from the reproducibility of human behaviour. Was this an *ante litteram* processual approach? Vico, in any case, introduced a somewhat strong anthropological point of view in historiography.

4. THE EARLY BRONZE AGE OF SOUTHERN LEVANT: ITS ARCHAEOLOGICAL RECOGNITION AND PERIODIZATION

Palestinian archaeology was started by the eminent Egyptologist William Matthew Flinders Petrie at the eve of the 20th century, as Petrie’s pupil Frederick Jones Bliss for the first time identified what we nowadays call “Early Bronze Age” as a definite material cultural horizon and stratigraphic period at Tell el-Hesi¹⁴. However, a name was actually given to this period by the Austro-German excavators of Tell es-Sultan, ancient Jericho, in 1907-1909, Ernst Sellin and Carl Watzinger, who called it with the somewhat ambiguous Biblical/ethnic label “Kanaanitische Period”¹⁵.

¹³ Finkelstein - Langgut 2014; Langgut - Adams - Finkelstein 2016; Weiss 2017a; 2017b.

¹⁴ Since the beginning of systematic archaeological exploration of Palestine, with the excavations by Sir William Matthew Flinders Petrie and Frederick Jones Bliss at Tell el Hesi in 1894 (Petrie 1891; Bliss 1894), the problem of its chronological correlation with History, namely with the history of Egypt, became an urgent issue of such a marginal archaeology. The city which hosted our conference conceals in the National Archaeological Museum A. Salinas a major document of the history of ancient Egypt, the so-called “Palermo Stone”, a reasoned list of the earliest rulers of the unified kingdom up to the V Dynasty. The Palermo Stone actually is the largest of seven fragments inscribed with the royal annals of the Old Kingdom bearing the complete list of the pharaohs of Dynasties I-V, a basic piece of evidence for the history of ancient Egypt in the Thinite Period and Old Kingdom (Wilkinson 2000, 29-36). This source has been an extraordinary reference point for the reconstruction of the history of neighboring Palestine during the Early Bronze Age. Generations of scholars have tried to combine the lists of pharaohs and the descending Egyptian periodization and chronology with the archaeology of Palestine (Kitchen 1987; 1991; Kantor 1992; Stager 1992; Hornung - Krauss - Warburton eds. 2006; Ryholt 2006; Sowada 2009; Höflmayer 2014a; Adams 2017).

¹⁵ Sellin - Watzinger 1913, 15.

A more appropriate definition of the Early Bronze Age, its material culture and internal subdivision, was, then, proposed by William Foxwell Albright after its excavation at Tell Beit Mirsim¹⁶. Albright had an admirable deep vision and he knew that an archaeological periodization of ancient Palestine could not exist *per se* without a strong link to the Egyptian and Mesopotamian chronologies¹⁷. For this reason, he anchored the new periodization to Egyptian absolute chronology, also with the contribution of his pupil George Ernst Wright, who used pottery as diagnostic element marking sequences of artifacts relating to the same periodizations¹⁸.

The main sites revealing Early Bronze Age strata at that time were: et-Tell/‘Ai, Tell es-Sultan/Jericho, Tell el-Mutesellim/Megiddo, Tell ed-Duweir/Lachish, and Tell el-Hosn/Beth Shean. Their material culture horizons and stratigraphies constituted the basis upon which such periodization was built up. It is more or less the same we still refer to, with additions and emendations.

After the Second World War, this periodization was further corroborated on the field by finds and stratigraphy of sites like Tell el-Far’ah North, excavated by Father Roland de Vaux o.p.¹⁹, who carefully detached the material culture of EB I and II, and of Tell es-Sultan/Jericho, as reconstructed by Lady Kathleen Mary Kenyon²⁰, who experimented on a large scale the stratigraphic method based upon vertical sections carefully cutting through strata, stages, and periods. Her interpretive labels referring to the Early Bronze Age, such as “Proto-Urban” for EBI, “Urban” for EB II-III, and “Intermediate Bronze Age” for EB IV, are largely employed still today. Before entering historical interpretation, Kenyon transformed archaeological strata into stages, phases and periods, thus endorsing the identity between cultural horizons and chronological periods.

The concept of “early urbanism” was thus introduced - a wolf in sheep’s clothing - incorporating historical interpretation into archaeological terminology.

Since then, periodization, chronology and historical interpretation, which in theory should be carefully kept as three separated paths in the archaeological investigation of the Early Bronze Age in Palestine, became indissolubly intertwined. Nevertheless, Kenyon and de Vaux, with their hard field-work, solid methodological framing, extraordinary knowledge of materials, and impressive results, largely contributed to the material definition of the Early Bronze Age culture in Palestine (tab. 1).

The chronological determinations and, thus, the connections between the Jericho and Tell el-Far’ah North sequences and the rest of the region remained unclear.

A further attempt was done at Tell es-Sultan by John Basil Hennessy, which under Kenyon’s supervision, published his PhD thesis on the EB sequence in Squares E III-IV (J.B. Hennessy, *The Foreign Relations of Palestine during the Early Bronze Age*, Oxford 1967).

¹⁶ Albright 1932; 1933; 1938.

¹⁷ Albright 1949; 1965.

¹⁸ Wright 1937; 1961.

¹⁹ de Vaux 1962.

²⁰ Kenyon 1981; Kenyon - Holland 1983.

Period	Wright 1937	Wright 1958	Lapp 1968; 1970	de Vaux 1970; 1971	Kenyon 1957	Italian- Palestinian periodization
EB IA 3300-3200 BC	Esdraelon Culture	EB IA	EB IA	Late or Upper Chalcolithic	PU A PU B	Sultan IIIa1
EB IB 3200-3000 BC	EB IA	EB IB	EB IB	EB IA	PU C	Sultan IIIa2
EB IIA 3000-2850 BC	EB IB	EB IC	EB IC	EB IB	EB I	Sultan IIIb1

Tab. 1 - Different periodization systems of EB I and EB II Southern Levant compared with the Italian-Palestinian periodization established at Tell es-Sultan/Jericho.

In the following decades (1960-1990), as the chronological grid was becoming more stable and it was deemed more reliable, the archaeological debate shifted on the interpretation of each cultural horizon/period and its possible internal subdivisions. This especially affected the Early Bronze I with the Egyptian connection during Pre-Dynastic/Naqada Period. In the meantime, archaeological exploration continued to produce information and to broaden the horizon including Syria, Lebanon and Transjordan. Over a long course of time, a number of newly excavated sites like Arad²¹, Tell el-²Areini/Tel Erani²², Tell el-Khuweilfeh/Tel Halif²³, Tell el-Qadi/Dan²⁴, Tell Dothan²⁵, Tell es-Sa'diyeh²⁶, Khirbet ez-Zeraqon²⁷, Tell es-Sakan²⁸ provided a further amount of archaeological data, but a very few complete stratigraphic sequences entirely covering the Early Bronze Age. Discoveries brought fresh evidence useful for historical reconstruction not only of Southern Levant, for example the palaces of Khirbet Yarmouk/Tel Yarmouth²⁹, Tell es-Sultan/Jericho³⁰, and Khirbet al-Batrawy³¹, or new finds in Sidon³² in Lebanon, but also in Egypt³³ and Syria (Ebla³⁴, Qatna³⁵), the two bordering regions which played a major role in shaping the early Levantine urbanization in the 3rd millennium BC.

²¹ Amiran *et al.* 1978; Amiran - Ilan 1996.

²² Yeivin 1961; Kempinski - Gilead 1991.

²³ Seger 1972; 1983; 1993; Seger *et al.* 1988.

²⁴ Biran 1994; 2008; Biran ed. 1996.

²⁵ Master *et al.* eds. 2005.

²⁶ Tubb - Dorrell - Cobbing 1996; 1997.

²⁷ Ibrahim - Mittmann 1987; 1988; 1991; 1994; Mittmann 1994; Genz 2002.

²⁸ de Miroschedji - Sedak 2001; de Miroschedji *et al.* 2001.

²⁹ de Miroschedji 2013.

³⁰ Nigro 2016a, 10, figs. 9-10; 2017b, 159-162; in this volume, S 3.2.

³¹ Nigro 2014b; 2016b, 139-149; 2017b, 162-164.

³² Doumet-Serhal 2009.

³³ Is the case of the recent discoveries at the site of Quesna, where a III Dynasty mastaba, possibly dated to the reign of King Khaba, was found (Rowland - Tassie 2018).

³⁴ Matthiae 2010; 2013.

³⁵ Morandi Bonacossi 2007.

At the end of the '80s and beginning of the '90s, the paramount synthesis by H. Weippert³⁶ and A. Mazar³⁷ certified a very simple scheme: EB I, EB II, EB III and EB IV, setting them in chronology between 3500 and 2000 BC (fig. 1). In the decades across the millennium (1990-2010) this scheme has been corroborated by the publication of renewed excavations in some major archaeological sites: Tell el-Mutesellim/Megiddo³⁸, Tell el-Hosn/Beth Shean³⁹, Khirbet Kerak/Beth Yerah⁴⁰, Tell el-Khuweilefeh/Tel Halif⁴¹, and Tell Fadous⁴² in Lebanon.



Fig. 1 - General view of the Western Section of Kenyon's Square M1 with the superimposition of the three successive Early Bronze II (3000-2700 BC) and Early Bronze IIIA-B (2700-2300 BC) city-walls, from east.

³⁶ Weippert 1988, 146-154.

³⁷ Mazar 1992, 105-110.

³⁸ Finkelstein - Ussishkin - Halpern eds. 2000; 2006; Finkelstein - Ussishkin - Cline eds. 2013.

³⁹ Braun 2004; Mazar ed. 2012.

⁴⁰ Greenberg *et al.* 2006; 2012.

⁴¹ Dessel ed. 2009.

⁴² Genz 2010; 2014; Genz *et al.* 2016.

EGYPT	Arch. Period	Bab edh-Dhra ^c	Arad	Jericho	'Ai	Khirbet Yarmouk	Khirbet Kerak	Megiddo	Beth Shan
Pre-Dynastic	EB IA 3400	Stratum V	-	Sultan IIIa1	-	-	Period A	Stratum XX/Level J-1	Stratum XVI
	3200								
0 Dynasty	EB IB 3150	Stratum IV	Stratum IV	Sultan IIIa2	Stratum I Stratum II	Phase 0	Period B	Stratum XIX/Level J-2 Stratum XIX/Level J-3	Stratum XV-XIII
	3000								
I DYNASTY	EB II 3000	Stratum III	Stratum III Stratum II Stratum I	Sultan IIIb1 Sultan IIIb2	Stratum III Stratum IV Stratum V	Phases IA-B Phase IIIA Phase IIIB	Period C	Stratum XVIII/Level J-4/4a	-
	2700								
	2500								
II DYNASTY	EB IIIA 2700	Stratum II	-	Sultan IIIc1	Stratum VI	Phase IIC Phase IID	Period D	Stratum XVII/Level J-5 Stratum XVI/Level J-6	Stratum XIII-XI
	2500								
V DYNASTY	EB IIIB 2500	-	-	Sultan IIIc2	Stratum VII Stratum VIII	Phase III	Period E	Stratum XV/Level J-7	-
	2350								
	2200								
VI DYNASTY	EB IVA 2350	Stratum I	-	Sultan IIId1	-	-	-	Stratum XIV/Level J-8	Stratum XI
	2200								
INTERMEDIATE VII-X DYNASTIES	EB IVB 2200	-	-	Sultan IIId2	-	-	-	-	-
	2000								

Tab. 2 - Archaeological periodization of the most relevant EBA Southern Levantine sites in relation to the Egyptian chronology.

Although elaborated through a consolidated tradition, such periodization of Southern Levant was not fitting those of Syria, Anatolia and Mesopotamia, with major differences from the Chalcolithic to the EB III and EB IV (see below tab. 3). This can be considered normal in the case of Anatolia and Mesopotamia, which traditionally follow the scheme created in the Diyala basin by the expedition of the Oriental Institute of Chicago (Early Dynastic I-II and III)⁴³, while it is more complicated in the case of the Lebanese and Syrian coast which largely share the same cultural features of Palestine. Material culture definition, phasing and terminology after Neolithic until the end of the Bronze Age vary considerably between Syria/Lebanon and Palestine.

On the opposite geographic side, the correlation with Egypt, the chronology of which has been continuously refined in the last decades⁴⁴, appeared again as the most decisive and debated one. A re-appraisal of the relationships between Egypt and Palestine in the Pre-Dynastic period was due to the important conference organized by E.C.M. van den Brink, which allowed to re-evaluate new finds and showed a direction to forthcoming research⁴⁵. In the following decades, new excavations in the Delta region provided more data on the interconnections between the two regions, which also had chronological implications. Imported Levantine finds in the royal tombs at Umm el-Qaab in Abydos⁴⁶, as well as in Saqqara⁴⁷, also allowed to interconnect the chronology of Early Dynastic Egypt with the periodization of the Levant (tab. 2).

On the other hand, in Southern Levant, excavations at Hazor had reached the Early Bronze Age strata and produced some relevant pieces of evidence, such as a sphinx bearing the cartouche of Menkaura⁴⁸, which is, along with the finds from Byblos and Ebla, among the few inscribed Pharaonic items found in the Levant.

At the beginning of the '10s of the new century, scholars tried to get maximum advantage from radiocarbon. C.B. Ramsey and his group applied it to the history and archaeology of Egypt, starting from selected samples related to pharaohs⁴⁹. The methodological framework focused on technical issues, bypassing a theoretical discussion about how measured absolute dates were connected to archaeological contexts, sequences, items, and then straight to historical personages. Moreover, everything was concealed into the mantle of a Bayesian statistical modelling⁵⁰, that is an arbitrary, even though motivated, adjustment of C14 measurements. As they affected the pharaohs' list and their absolute chronology, these studies inevitably had

⁴³ Frankfort 1933; 1934; 1935.

⁴⁴ Mellaart 1979; Kitchen 1987; 1991; Kantor 1992; Stager 1992; Ward 1992; Hassan - Serrano - Tassie 2006; Hornung - Krauss - Warburton eds. 2006; Ryholt 2006.

⁴⁵ van den Brink ed. 1992.

⁴⁶ Dreyer 1998; 2011; Dreyer *et al.* 2003; 2006.

⁴⁷ McFarlane 2003.

⁴⁸ Ben-Tor 2013.

⁴⁹ Dee *et al.* 2009; Ramsey *et al.* 2010; Shortland - Ramsey eds. 2013, Part V; cf. Bonani *et al.* 2001; Manning 2006.

⁵⁰ Ramsey 2009.

the greatest success, and undoubtedly represent a major contribution to the chronology of pre-classical times. Nevertheless, how the dates of each reign have been established, i.e. how date samples have been connected to history and archaeology, is a matter which has to be verified in each single case, before using Bayesian statistics.

In the slipstream of these major contributions on Egypt, and following the most dated approaches on periodization and synchronization, also scholars working on the ancient Levant produced an attempt towards a general re-assessment of the Early Bronze Age chronology by means of radiocarbon. The study, published by J. Regev and other scholars (Regev *et al.* 2012), drastically revised the absolute chronology of Southern Levant, with a major impact on the correlation of this region with Egypt. On the ground of a re-appraisal of already known radiocarbon dates, integrated with fresh data from a baulk of 1 x 1 m at Megiddo, J. Regev and the other researchers suggested to raise by at least two centuries the chronology of the Early Bronze Age I-III and to extend to four-to-five centuries the duration of the EB IV/Intermediate Bronze Age. Such a shift back was basically supported by data from two sites, Tel Yarmouth⁵¹ and Megiddo⁵², which do not actually offer complete radiocarbon sequences for the whole EBA. This was the weakest stone of the revision, together with a partial understanding of stratigraphy/contexts from where samples were taken. They were followed by a series of cognate studies, expanding this vision of an ultra-high chronology to the whole Levant⁵³.

Tell es-Sultan/Jericho was obviously included in such a study, as this prominent archaeological site provided a number of stratified C14 dates for the Early Bronze Age. Jericho stratigraphy, established and published by Kathleen M. Kenyon in the 1950s, was reappraised by the Sapienza University of Rome–Palestinian MOTA-DACH Joint Expedition (1997-2019), which proved it substantially reliable (fig. 2). This offered the anchor to fix cultural horizons defined by decades of excavations into a reliable chronological grid. For this reason, after Regev *et al.* study, the Joint Italian-Palestinian Expedition re-examined all published C14 dates adding new samples taken from carefully stratified and published archaeological contexts, which were measured by the CEDAD Laboratory (University of Salento, Lecce, Italy). They provided absolute dates solidly connected with stratigraphy useful to double-check the proposed High Chronology.

The final results of this research were published in the journal “Radiocarbon” in 2019⁵⁴: the Early Bronze Age stratigraphic periodization and its chronology at Jericho appeared as shown in tab. 3. It is consistent with traditional chronology and keeps the already established correlations between Syria-Palestine and Egypt.

⁵¹ Regev - de Miroschedji - Boaretto 2012.

⁵² Regev *et al.* 2014.

⁵³ Höflmayer 2014b; Höflmayer *et al.* 2014; Adams 2017; Greenberg 2017, 34-36; Schwartz 2017, 97-114.

⁵⁴ Nigro *et al.* 2019.

Egypt chronology	Northern Levant periodization	Southern Levant periodization	Tell es-Sultan periodization	Absolute chronology
Pre-Dynastic	Late Chalcolithic	EB IA	Sultan IIIa1	3500-3200 BC
0 Dynasty 00 Dynasty		EB IB	Sultan IIIa2	3200-3000 BC
I Dynasty	EB I-II	EB IIA	Sultan IIIb1	3000-2850 BC
II Dynasty	EB III	EB IIB	Sultan IIIb2	2850-2700 BC
III Dynasty IV Dynasty		EB IIIA	Sultan IIIc1	2700-2500 BC
V Dynasty	EB IVA1 EB IVA2	EB IIIB	Sultan IIIc2	2500-2300 BC
VI Dynasty	EB IVB[1-4] ⁵⁵	EB IVA	Sultan IIId1	2300-2200 BC
First Intermediate VII-X Dynasties		EB IVB	Sultan IIId2	2200-2000 BC

Tab. 3 - Archaeological periodization of Tell es-Sultan/ancient Jericho in the Early Bronze Age, in relation to the Egyptian chronology and Northern Levant (Western Syria) periodization.

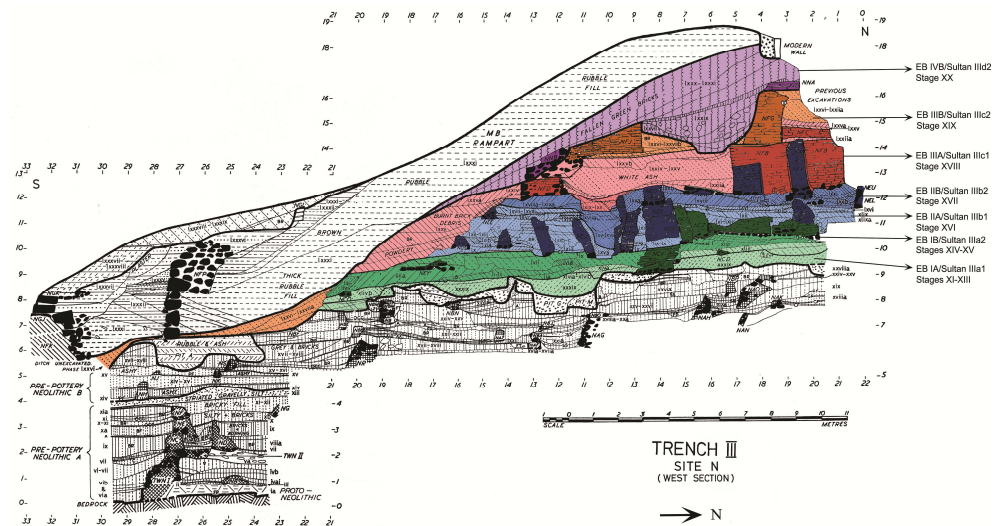


Fig. 2 - Western Section of Kenyon’s Trench III with the indication of the stratigraphic sequence identified for the Early Bronze Age (I-IV).

⁵⁵ The EB IV periodization is based on results obtained from the analysis of Ebla’s stratigraphic sequence (D’Andrea 2014-2015).

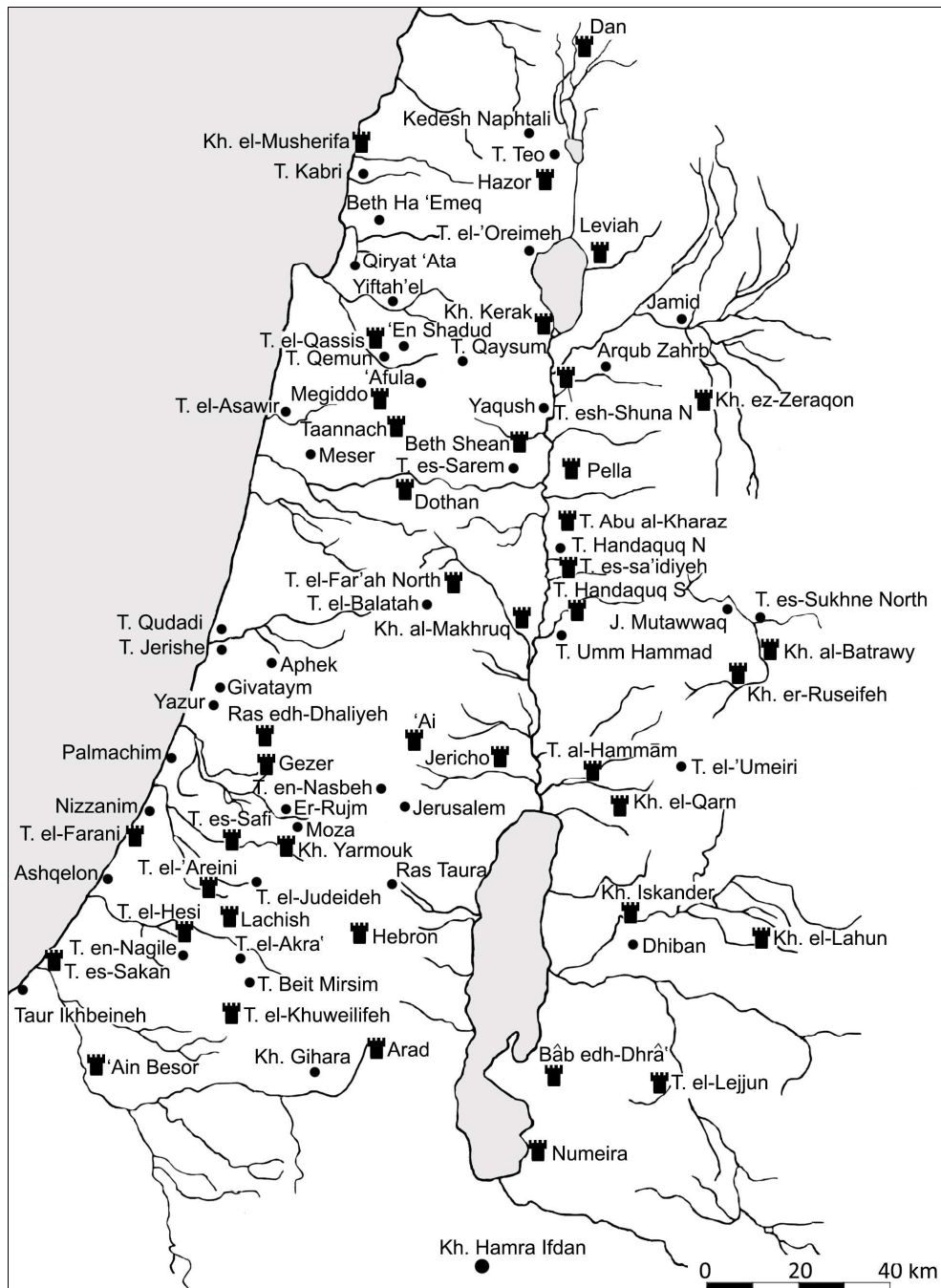


Fig. 3 - Map of EB I-III sites of the Southern Levant with fortified settlements highlighted.

5. EARLY BRONZE AGE: CULTURAL HORIZONS AND PERIODS

Notwithstanding the incertitude of a method which often confuses “periods” with “cultural horizons” and which imagines time as a vertical section or a sequence of events - while gaps and shifts between different sites/observers made evident the full validity of relativity, I would say, especially in archaeology - the following summary of the Southern Levantine periodization should help the reader compare data and processes recorded in the two sites of Tell es-Sultan/Jericho and Tall al-Hammām⁵⁶.

5.1 A new culture: “Bronze”

The beginning of the Early Bronze Age at about the mid of the 4th millennium BC is characterized by the appearance of a new culture. Its distinguished features have been identified all over the Southern Levant and its progressive developments, during a time span of about one millennium and a half, have been divided on the grounds of compared stratigraphy and material culture transformations into four main periods (EBA I-IV), each one further sub-divided into two sub-periods (A-B; tab. 3). The backbone of such a periodization is represented by the stratigraphies of a bunch of major sites: Tell el-Qadi/Dan, Khirbet Kerak/Beth Yerah, Tell el-Hosn/Beth-Shean, Tell el-Mutesellim/Megiddo, Tell Ta’annek/Taannach, Tell el-Far’ah North, et-Tell/ ‘Ai, Tell es-Sultan/Jericho, Tell el-Jazari/Gezer, Khirbet Yarmouk/Tel Yarmouth, Tell el-Hesi, Tell el-’Areini/Tel Erani, Tell el-Khuweilifeh/Tel Halif, Arad, Bâb edh-Dhrâ‘ (fig. 3). Among these sites, however, only two provide complete sequences across the whole Early Bronze, including its last stage, the EB IV/Intermediate Bronze Age, namely Jericho and Megiddo (see tab. 2).

5.2. Early Bronze I

The culture labelled as “Bronze” has a long formative phase (EB IA, 3500-3200 BC), lasting two-to-three centuries across the mid of the 4th millennium BC⁵⁷. This initial stage is strongly characterized by regionalism and a significant settlement density in favourable agricultural niches (tab. 4). Common extra-regional traits can be recognized in architecture and consist of round and curvilinear structures (circular and oval-shaped), becoming gradually more regular and eventually rectangular in time⁵⁸. Pottery wares typical of this culture (Red Polished, Grey Burnished Slip, Band Slip, Line Painted, etc.) have been widely studied in their spatial and diachronic distribution⁵⁹; they overlap in time and partially in space and vary in features and attestation from one site to another. Economy is based upon agriculture of Mediterranean crops becoming more popular and intensively cultivated, especially

⁵⁶ Who prefers to keep the new high chronology only has to raise everything by two centuries, as the heart of the study, that is the main features, and the sequence of cultural horizons mostly keeps its validity.

⁵⁷ Nigro 1994, 1-2; Wengrow 2006, 135-150; Greenberg 2014, 271.

⁵⁸ Braun 1989, figs. 4, 11, 17; Sebag 2005, 224-225.

⁵⁹ Wright 1937, 42-44; 1958, 37-45; Amiran 1969, 41-57; Sala 2005a.

olive trees and grapes⁶⁰. Ideology is focused on overcoming death, familiar lineages, agriculture-based cults and rites. Burial custom is characterized by disarticulated inhumations in familiar/clan tombs, often related to megalithism⁶¹.

In a mature stage, corresponding to a second sub-period or phase (EB IB, 3200-3000 BC), settlements increase in complexity showing a corresponding economic advance⁶²: pottery tends to uniform and specialized wares turn up, primary burial and funerary offering appear⁶³. The second stage of EB I, considered an incipient urban phase (also called “Proto-Urban”), is characterized by the strong interconnection with the Naqada III culture in Early-Dynastic Egypt⁶⁴, and by the foundation of Egyptian trading *entrepôts* in Southern Palestine along the *Via Maris*⁶⁵, as well as by the spread of Egyptian and Egyptianizing items throughout the region⁶⁶. A second line of contact between Levantines and Egyptians is the Copper Route running from the Sinai Peninsula to the Dead Sea across the Wadi ‘Arabah and continuing northwards along the Jordan Valley⁶⁷.

5.3. Early Bronze II: the rise of the city

The passage to a new period is characterized by the rise of the urban model, marked by the erection in almost all the key-sites of impressive city-walls⁶⁸. This cultural feature in many respects represents the completion of the development started in the EB IB. The rise of the city is soundly reflected in economy by a wealth growth and in material culture by technological upgrade, with the introduction of the potter’s wheel. Public institutions, central administration, international trade achieve a recognizable socio-economic role⁶⁹, as well as territorial control and organized land exploitation, under the influx of the Syrian, Mesopotamian and Egyptian civilizations⁷⁰.

⁶⁰ Ilan 2002; Nigro 2014c, 32-33.

⁶¹ Polcaro 2006, 283-307; in this volume.

⁶² Esse 1989, 82-85.

⁶³ Polcaro 2006, 147-150.

⁶⁴ Hennessy 1967, 26-48; Richard 1987, 27; Esse 1989, 90-93; Kroeper 1989; Oren 1989; Ward 1991: 12; van den Brink ed. 1992; Mazar 1992, 106; Oren - Yekutieli 1992; van den Brink - Levy eds. 2002; Braun 2011, 110-111.

⁶⁵ This hypothesis seems confirmed by the presence of EB I settlements along the coast, such as Ashqelon, Tel Megadim (Gophna 1995, 277-279; 2002), Tell es-Sakan (de Miroschedji *et al.* 2001; de Miroschedji 2002, 41-45; Braun - van den Brink 2008, 659-672; Braun 2011, 112-119). The discovery of a monumental *dromos* tomb at Tell el-Khuweilfeh/Tel Halif also attested the Egyptian presence in Southern Levant during the EB IB (Levy *et al.* 2001, 424-428; Braun - van den Brink 2008, 658-659).

⁶⁶ Sala 2012.

⁶⁷ Nigro 2014d.

⁶⁸ Kempinski 1992, 68-75; Mazar 1992, 119-123.

⁶⁹ This is reflected by the earliest palatial buildings at Khirbet Yarmouk/Tel Yarmouth (de Miroschedji 2003; 2013) and Tell el-Mutesellim/Megiddo (Loud 1948, 70-78; Nigro 1994, 1-27), and communal buildings such as the ‘Ai water reservoir (Callaway 1980) and the Granary

This is reflected in the archaeological record by several finds. Pottery-making and metallurgy also show technological improvements and a progressive rate of specialization of techniques, fabrics, shapes and functions⁷¹. The flow of Egyptian and Egyptian-like items continues also in the first stage of this period⁷².

From a stratigraphic point of view, while the beginning of the EB II is easily distinguishable, its inner subdivision remains aleatory. Some scholars have surmised a short duration of this period⁷³, but it is not clear if this is a real stratigraphic observation or an attempt of compensating a major raising of the absolute chronology of the following EB III.

Four key-sites located in different districts of Palestine are especially useful to describe EB II period: Tell el-Far'ah North, et-Tell/'Ai, Tell es-Sultan/Jericho and Arad (tab. 4). They all had a significant EB I occupation upon which the EB II fortified city arose. All have two major constructional phases representing EB II. In each site this stage is characterized by new features: intensive and massive building activities, with monumental city-walls and public buildings; a prominent growth in pottery technology; the solid establishment of an agricultural centralized society; the flourishing of international trade, especially with Egypt. At Tell es-Sultan, where several sequences are available⁷⁴, a bipartition has been suggested also on the ground of building activities marking the second phase on the city-walls (with the addition of horse-shoe shaped towers).

Nonetheless, it is surprising that EB II, the “sandwiched period”, remained in many respects neglected in historical reconstructions. One of the reasons is that it was not properly recognized at Tell el-Mutesellim/Megiddo, possibly the most excavated guide-site of the region.

The Oriental Institute Expedition did not focus on this phase. EB II material culture in the '30s of the last century was not well known. Moreover, there is a specific stratigraphic reason: American archaeologists excavated the main sacred area of the site in the Bronze Age (Area BB, later re-named by Israeli archaeologists Area J), uncovering three EB III major temples⁷⁵. Then, for the sake of preservation of these buildings, they shifted eastwards on the tell flanks and uncovered, in the underlying layers, two superimposed EB IB temples (in Stratum XIX/Levels J2-3; Temple 4050 and its

Building of Khirbet Kerak/Beth Yerah (Esse 1991, 33-53; Mazar 2001; Greenberg - Paz 2004, 1-4; Greenberg *et al.* 2012, 97-102, figs. 17b, 20-22).

⁷⁰ Kempinski 1978, 32; Esse 1989, 90-93; Harrison 1993.

⁷¹ EB II pottery production is characterized by a growth of specialization and standardization (Amiran 1969, 58-66), also reflected by the introduction of potter's wheels (Fiaccavento 2013, 80-83).

⁷² Sala 2012, 276; 2014; Nigro 2014d, 49.

⁷³ Regev *et al.* 2012, 558-559; Greenberg 2017, 34-35.

⁷⁴ In Areas B and Trench III; in Trench I; in Area G and Kenyon's Square H I-II; in Area F.

⁷⁵ Loud 1948, fig. 394; Dunayevsky - Kempinski 1973, 172, fig. 9; Kempinski 1989, 30, 176, fig. 14; Sala 2008, 228-240; Ussishkin 2015, 93-95, fig. 27.

doubled reconstruction⁷⁶). The EB II temple remained concealed underneath the EB III temples, and, unfortunately, when it was discovered by the Tel Aviv University Expedition, it was inexplicably and erroneously attributed to EB IB⁷⁷. The EB II gap at Megiddo, then, became an *a priori*, even when the most gigantic temple so far excavated in Palestine came to light, and notwithstanding the erection of the city-walls in Stratum XVIII⁷⁸ demonstrated that what was then labelled Level J-4 is the first urban stage of the site. As EB II is a cultural label - the attribution to the EB II of Stratum XVIII/J-4 should be compulsory. Moreover, such features, namely heavy fortification wall and big temple also occur in the other major EB II sites in the region. Conversely, the TAU Expedition attributed to the EB IB three strata/or levels: respectively J-2 and J-3, corresponding to Oriental Institute's Stratum XIX, and a further EB IB huge stratum, J-4, corresponding to OI's Stratum XVIII, with the Great Temple⁷⁹. From a stratigraphic point of view, the Great Temple being connected to the city-wall, belongs to Stratum XVIII, that is definitely an EB II stratum as also demonstrated by finds (some of them neglected), such as pottery published in the '40s⁸⁰, or that retrieved by TAU Expedition and published by M.J. Adams⁸¹. The "Megiddo misunderstanding" concerning EB II has had dramatic effects on the interpretations of several other sites of the region, as it is exemplified by the revision of already published EB II material at Beth Shean⁸².

In the light of the independent analysis of the stratigraphic and ceramic evidence from Tell es-Sultan, 'Ai and other major sites⁸³, it is clear that the underestimation of Early Bronze II - i.e. the period when the city first appears in the history of Palestine - is

⁷⁶ Loud 1948, 61, fig. 390, pls. 271-282; Kempinski 1989, 173-174; Finkelstein - Ussishkin 2000a, 38-55, figs. 3.10, 3.11; 2000b, 577-579; Adams 2013a, 47-50, figs. 2.19, 2.20; Ussishkin 2015, 72, 74-80, figs. 7-10.

⁷⁷ The possible reasons were the lack of finds inside it (the temple was abandoned after an earthquake marking the end of EB II: Marco *et al.* 2006; Finkelstein 2013, 1331; the same event was recognized also at Khirbet Kerak, Tell es-Sultan/Jericho, et-Tell/'Ai, Khirbet al-Batrawy, Tell el-Husn/Pella, Tell es-Sa'idiyeh: Nigro 2014a, 72, fn. 56; Gallo 2014, 146-153), and the misdating of a votive pit where Egyptian-like vessels were found cutting through the Great Temple structures (Finkelstein - Ussishkin 2000a, 55-67; Goren 2000; Joffe 2000, 170-175; Goren - Ilan 2003, 42-45, 49-50; Finkelstein - Ussishkin 2006, 7-8, 17-18; Finkelstein - Ussishkin - Peersmann 2006, 36-38, 50-52; Ussishkin 2018).

⁷⁸ A stretch of the earliest city-wall was also identified in the south-eastern corner of Area BB (Loud 1948, 64-70, figs. 152-154, 391-392).

⁷⁹ Finkelstein - Ussishkin 2000a, 55-65, fig. 3.26; 2000b, 585-586; Finkelstein - Ussishkin - Peersmann 2006, 36-41, fig. 3.14; Adams 2013a, 50-74, figs. 2.23-2.25; Adams - Finkelstein - Ussishkin 2014, 286-298; Adams *et al.* 2014, 35-36, figs. 5-7; Ussishkin 2015, 80-85, figs. 15-17.

⁸⁰ Loud 1948, pl. 100. Stratum XVIII was dated to the EB II also by W.F. Albright (1949), K.M. Kenyon (1958, 52*-58*), I. Dunayevski and A. Kempinski due to the presence of a fragment of Abydos Ware (Dunayevski - Kempinski 1973, 168, fn. 13) and comparisons with the ceramic assemblage of Arad (Kempinski 1989, 28).

⁸¹ Adams 2013b, 297-301.

⁸² Mazar ed. 2012, 22-23.

⁸³ Nigro 2010a, 329-338.

due to some macroscopic misunderstandings. I can suggest at least two reasons for this: a) confusion of the EB II material culture with that of EB IB; b) “sandwiched” situation of EB II strata/structures compressed between underlying EB I layers and usually largely destructive EB III reconstructions, which followed a disruptive earthquake swarm occurred at the end of EB II. This conjunction generated the “EB II occupational gap”, also equipped with explanations to justify it. One wonders how a phenomenon like urbanism - clearly incipient if not patent in Megiddo Level J4 - could be interrupted and then resumed after two centuries exactly in the same place ... and how one could consider reliable evidence of such a double century hiatus the remains of owls’ meals⁸⁴.

A re-assessment of the same period in Tell es-Sultan/Jericho accomplished by the Italian-Palestinian Expedition has clearly shown that EB II has a solid consistency, both from a stratigraphic and a material culture ground⁸⁵. In Jericho the EB II is the stage when the urban model was established by the erection of impressive city-walls, and through a functional organization of space with gates, market, dwellings, a temple and a palace, showing that a new socio-economic entity was borne: the city (§ 6.2.).

Data from Tell es-Sultan/Jericho fit together with those from Tell el-Far’ah North, et-Tell/‘Ai, Tell el-Hosn/Beth Shean, and Arad, and several other centres (Tell el-Qadi/Dan, Khirbet Kerak/Beth Yerah, Tell Ta’annek/Taannach, Tell Dothan, Khirbet al-Makhruf, Tell el-Jazari/Gezer, Tell el-’Areini/Tel Erani, Khirbet Yarmouk/Tel Yarmouth, Tell es-Safi/Gath, Tell el-Husn/Pella, Tell es-Sa’idiyeh, Khirbet ez-Zeraqon, Khirbet al-Batrawy, Bâb edh-Dhrâ’), and support the further subdivision of the EB II into two stages. This should definitely discourage those who think that this was a short and ephemeral period in Palestine.

EB II is definitely a major period in the archaeology of Palestine. It parallels the Thinite Period in Egypt, when the first two dynasties unified and organized the rising pharaonic kingdom. It ended in Palestine with a co-occurrence of catastrophes: drought, earthquake swarm and shifting of the Egyptian trade from overland to maritime, with the choice of Byblos and the Syrian-Lebanese coast as target for commercial exchanges⁸⁶. This shift affected both economy and social organization of the relatively young Palestinian city-states. Such interacting factors brought the first urban experience to an abrupt collapse, immediately followed by a robust recover, due to the newly established relationships with the Northern Levantine coast and Syria, where a more complex (literate) and durable urban culture was flourishing in the EB III.

5.4. Early Bronze III: the affirmation of the northern/coastal urban model

The EB III marks a major growth of the urban centres of the region and it is very well illustrated by many stratigraphies (tab. 4).

⁸⁴ Adams - Finkelstein - Ussishkin 2014, 295.

⁸⁵ Nigro 2010a, 110, pls. LI:4-5, 9-10, LII: 3, 8, LIII: 4-5, 11 LIV:1-2; Nigro *et al.* 2019, 222-237.

⁸⁶ Helck 1971, 16-17; de Miroschedji 2012; Sala 2012, 276-277; Greenberg 2014, 271, 274.

Its first stage, or sub-period (EB IIIA), is characterized by intensive building activities, including the reconstruction of city-walls and the widening or doubling of fortifications, as well as by the diffusion of cultural elements irradiating from Northern Levant, the Lebanese coast and Syria, where the urban phenomenon is contemporarily reaching its apex: Ugarit, Byblos, Sidon; Ebla, Hama, Qatna, Tell Asharneh, Hazor can fully testify this⁸⁷.

The guide-site along with Megiddo is now Khirbet Kerak. The earliest stage of EB III is represented by Stratum XVII/Levels J-5+J-6 at Megiddo, Period D at Khirbet Kerak, Phase III (C) at Tell Ta'annek/Taannach, Stratum XII at Tell el-Hosn/Beth Shean, Stratum XIV at Tell Dothan/Dothan, Stratum XXIII at Tell es-Jazari/Gezer, Period Sultan IIIc1 at Tell es-Sultan/Jericho, Stratum VI at et-Tell/'Ai, Phases IIC-D at Khirbet Yarmouk/Tel Yarmouth, Strata XV-XIV at Tell el-Khuweilifeh/Tel Halif, Period Batrawy IIIa at Khirbet al-Batrawy, Stratum (IP) 19 at Tell el-'Umeiri, Strata C-D at Khirbet Iskander, and Stratum II at Bâb edh-Dhrâ'. In all of these major sites, EB IIIA envisages a massive reconstruction of the city defences, reconstructed and strengthened by adding exterior defensive lines with outer walls, terrace walls, scarp walls and ditches⁸⁸. These monumental structures exhibit the use of new techniques, such as higher and stronger stone foundations, with limestone boulders usually well fitted into the ground, the insertion of wooden chains into the mudbrick superstructures, the use of highly standardized bricks, a careful coating and refining of walls, and a coronation with stone slabs and wooden balconies and crenellations.

The second major feature of the period is the clear appearance of palaces as central administrative and symbolic institutions of the city-states. They are known at Megiddo⁸⁹, Khirbet Yarmouk/Tel Yarmouth, Tell es-Sultan/Jericho, Khirbet al-Batrawy⁹⁰, Khirbet ez-Zeraqon⁹¹, Tell Fadous. These buildings host differentiated public functions (administrative, military and economic) and testify to the rise of an élite ruling the city and its territory. Trade and technology are improved and finds suggest a maximum flourish of urban economy during the EB IIIA and in the first stage of the following period. Then, during EB IIIB, overexploitation and conflicts undermine the fragile urban system of Southern Levant, and progressively degenerated environmental conditions, ending with drought and famine, provoke the final collapse of it. Many sites are abandoned; other are reduced in extension and complexity - the whole society regress to rural economy and livestock care⁹².

⁸⁷ Mazzoni 1985, 9-11; 2002, 73-74; Akkermans - Schwartz 2003, Chap. 7; Genz 2012; Matthiae - Marchetti eds. 2013; Cooper 2014, 283-289.

⁸⁸ During EB III many fortification systems were strengthened, as attested to at Khirbet Yarmouk/Tel Yarmouth (de Miroschedji 1990), et-Tell/'Ai (Callaway - Schoonover 1972; Callaway 1980), Khirbet al-Batrawy (Nigro 2016b, 138), Tell es-Sultan/Jericho (Nigro 2006a, 361-374; 2009a, 182).

⁸⁹ Nigro 1994, 16-23.

⁹⁰ See fn. 31.

⁹¹ Genz 2002, 96-98.

⁹² Nigro 2017b, 165-166, tab. 8.1.

SOUTHERN LEVANT EB I-III SITES	EB IA	EB IB	EB IIA	EB IIB	EB IIIA	EB IIIB
Tell el-Qadi/Dan	-		Stratum XV	Stratum XV	Stratum XIV	
Tel Kedesh Naphthali	+		+	+	+	
Kh. el-Musherifa/Rosh Ha-Niqra	Stratum II		Stratum I	Stratum I	Post-Stratum I	
Tell Waqqas/Hazor	-		Stratum XXI	Stratum XXI	Strata XX-XIX	
Tel Teo	-	Strata V-IV	-	-	-	
Tell Kabri	Strata 11-10	Stratum 9	Stratum 8	Stratum 7	Abandonment	
Beth Ha 'Emeq	Strata VI-III		-	-	-	
Khirbet Khalaliya/Yiftah'el	Stratum II		-	-	-	
Qiryat 'Ata	-	Strata III-II	Stratum I	Stratum I	-	
Tell el-'Oreimeh/Tel Chinnereth	Scattered pottery sherds		Stratum IX	Stratum IX	Abandonment	
Khirbet Kerak/Beth Yerah	Period A	Period B	Period C	Period C	Period D	Period E
Tell Qassis/Tel Qashish	-	Strata XV-XIII	Stratum XII	Stratum XII	Stratum XII	
Tell Qemun/Tel Yoqne' am	+		+	+	+	
Tell Qasyum/Tel Qishion	+		Gap?	Gap?	Strata I-II	
'En-Shadud	Strata II-I		-	-	-	
'Afula	Strata X-IX		Stratum VIII	Stratum VIII	Stratum VIII	
Khirbet Sheikh Meser/Meser	Stratum II	-	-	-	-	
Tell el-Mutesellim/Megiddo	XX/J-1	XIX/J-2+J-3	XVIII/J-4+J-4a	XVIII/J-4+J-4a	XVII-XVI/J-5+J-6	XV/J-7
Tell el-Mukharkhas/Tel Rekhes	+		+	+	+	
Tell Ta'annek/Taannach	-		Phases I-II (A-B)	Phases I-II (A-B)	Phase III (C)	Phase IV
Tell el-Hosn/Beth Shean	Stratum XVI	Strata XV-XIII	Gap?	Gap?	Stratum XII	Stratum XI
Tell es-Sarem/Tel Rehov	-		+	+	+	
Tell el-Asawir/Tel Esur	Str. III (GVI-IV)	Str. II (GIII-I)	-	-	-	
Tell Dothan/Dothan	Stratum XVI		Stratum XV	Stratum XV	Stratum XV	
Yaqush	+		+	+	+	
Khirbet al-Makhrug	Stratum IV		Strata I-II	Strata I-II	Stratum III	
Tell el-Far'ah North	Period III		Period IV	Period IV	Abandonment	
Tell el-Balatah/Shechem	Stratum XXIII		-	-	-	
Tell Qudadi	-		-	-	+	

Tell Jerishe	-	-	+	+	+	Abandonment
Ras el-'Ain/Aphek	-	+	+	+	+	Abandonment
Givataym	+	+	-	-	-	-
Yazur	+	+	-	-	-	-
Palmachim Quarry	Stratum 3	Strata 2-1	-	-	-	-
Ras edh-Dhaliyeh/Tel Dalit	"Pre-Stratum V" - Stratum V	Stratum V	Strata IV-II	Stratum XXIV	Stratum XXIII	Abandonment
Tell el-Jazari/Gezer	-	Stratum XXV	Strata III-V/Periods C-B	Strata IIIb1	VI/A	VII-VIII/A1
Et-Tell/'Ai	-	Strata I-II	Sultan IIIb2	Sultan IIIb2	Sultan IIIc1	Sultan IIIc2
Tell es-Sultan/Jericho	Sultan IIIa1	Sultan IIIa2	-	-	-	-
Moza	Stratum V	Stratum V	Stratum 19	Stratum 19	Stratum 19	Stratum 19
Jerusalem	Stratum 20	Stratum 20	Stratum 19	Stratum 19	Stratum 19	Stratum 19
Tell en-Nasbeh	+	+	-	-	-	-
Nizzanim	Strata 5-3	-	Gap?	Gap?	Stratum 2	Stratum 2
Tell el-Farani/Tel Poran	-	-	-	-	+	+
Ashqelon Afridar	Strata 1-2	-	Stratum pre-XXIV	Stratum pre-XXIV	Stratum pre-XXIV	Stratum pre-XXIV
Tell es-Safi/Gath	-	-	Stratum E7	Stratum E7	Stratum E6	Stratum E5c-a
Khirbet Yarmouk/Tel Yarmouth	-	Phase 0	Phases IA-B/IIA-B	Phases IA-B/IIA-B	Phases IIC-D	Phase III
Er-Rujm	-	Strata III-II	-	-	-	-
Tell el-'Areini/Tel Erani	Str. XI-X/D	Str. VIII-VI/C	Strata V-II/Period B	Strata V-II/Period B	Str. I-Post I/A	Abandonment
Tell el-Judeideh	-	-	-	-	+	+
Ras Taura	-	-	-	-	+	+
Tell el-Hesi	Scattered pottery sherds	Scattered pottery sherds	Gap?	Gap?	Sub I-I (EB4a-e)	Destruction?
Tell ed-Duweir/Lachish	+	+	+	+	+	+
Tell er-Rumeidah/Hebron	-	-	-	-	Strata IV-III	Strata IV-III
Tell el-Akra'/Tel Agra	-	-	+	+	-	-
Tell en-Nagile/Tel Nagila	-	-	Stratum XIV	Stratum XIV	Strata XIII-XII	Strata XIII-XII
Tell es-Sakan	-	Levels 9-6	Gap?	Gap?	Levels 5-1 (A5, B1, C4)	Levels 5-1 (A5, B1, C4)
Horvat 'Illin Tahitit	-	Strata IV-III	-	-	-	-
Taur Ikhbeineh	Phases V-II	Phases V-II	-	-	-	-
Tell Beit Mirsim	-	-	-	-	-	-
Tell el-Khuweilifeh/Tel Halif	Str. XVII- XVI	-	Gap?	Gap?	Strata XV-XIV	Stratum J Stratum XIII

	Stratum IV	Strata III-II		Stratum IV	Stratum IV	Abandonment
		Stratum III	Strata II-I			
'Ain Besor	-					Abandonment
Arad	-					Abandonment
Khirbet Gihara/Tel 'Ira	-	-				Stratum IX
Leviah	-	+				+
Jamid	+	+				+
Arqub Zahrb	+	+				+
Tell esh-Shuna Norrth	Stratum IV	Stratum III	Stratum II			Abandonment
Khirbet ez-Zeraqon	-	-	LBP			LBP
Tell el-Husn/Pella	-	+	+			Abandonment
Tell Abu al-Kharaz	-	Phase IA-IB	Phases II A-B			Abandonment
Tell Handaqaq North	-	-	+			Abandonment
Tell es-Sa'idiyeh	Phases I.5-I.4		Phases I.3-I.2			Abandonment
Tell Handaqaq South	-	-	-			Strata I-IV
Tell es-Sukhne North	-	-	+			Abandonment
Khirbet al-Batravy	Batrawy I	Batrawy I	Batrawy IIb			Batravy IIIa Batrawy IIIb
Jebel Mutawwaq	+	+	+			-
Khirbet er-Ruseifeh	-	-	+			+
Tell Ummammad al-Sharqi	Stage 2, Ph. 1-10	Stage 3, Ph. 11-13	Stage 4/5, Ph. 14, 15-16			Abandonment
Tell el-'Umeiri	Stratum (Ip) 21	Stratum (Ip) 21	Stratum (Ip) 20			Stratum (Ip) 19
Tall al-Hammam	+	+	+			+
Khirbet el-Qarn	+	+	+			+
Khirbet Iskander	-	-	-			Phases C-D
Khirbet el-Lahun	+	+	+			+
Bâb edh-Dhrâ'	Stratum V	Stratum IV	Stratum III			Stratum II
Tell el-Lejjun	+	+	+			+
Numeira	-	-	-			+
Khirbet Hamra Ifdan	-	-	Phase 3			Phases 4-5

Tab. 4 - Stratigraphical correlation between the main EB I-III Southern Levantine sites.

5.5. Intermediate Bronze Age/Early Bronze Age IV

What follows is one of the most studied stages in the whole archaeology of the Levant, when a general crisis affects early city-states so that many of them are destroyed or abandoned; those which survive adopt a reduced model⁹³ (fig. 4).

Different socio-economic phenomena and cultural trajectories are again documented by different areas⁹⁴. For example, the coast-cities are almost not affected by the crisis described above. Nevertheless, the collapse of territorial politic entities facilitates a renovated deal of sedentarization, with new nomadic groups moving into the land from the east and the south. Different settlement patterns are known, as well as different social groups are confronted, with a recover of the nomadic and pastoral lifestyle. Material culture also undergoes an oversimplification and, in the meanwhile, experiments powerful innovations, such as the introduction of the copper-tin alloy⁹⁵. What has been described as the first major crisis of the Bronze Age society and culture is in the meantime the cradle of new more successful technological, political, social and economic developments⁹⁶.



Fig. 4 - The site of Tell es-Sultan/ancient Jericho where a village arose on the ruins of the fortified city during the Early Bronze IV, from south-west.

⁹³ The case of Tall al-Ḥammām (see Byers in this volume) can be better evaluated if we think that it basically has to be ascribed to the Early Bronze IIIB horizon of the region (called EB IV at the site - on the ground of its anticipatory nature).

⁹⁴ This topic has been recently analysed in D'Andrea 2014; 2015; 2016.

⁹⁵ Montanari 2014, 106; Nigro in press.

⁹⁶ An overall synthesis is offered below by Marta D'Andrea's essay.

6. EARLY BRONZE AGE STRATIGRAPHY AND PERIODS AT TELL ES-SULTAN/JERICHO

The extension of the excavated areas in EBA strata, the presence of a huge necropolis which has provided a large set of complete pottery shapes to compare, made the EBA stratigraphy of Tell es-Sultan/Jericho a major pillar for the periodization of Early Bronze Age Palestine.

The earliest periodization at Jericho was produced by John Basil Hennessy in his PhD dissertation *The Foreign Relations of Palestine During the Early Bronze Age* (London 1967) and it was based only on one field of Tell es-Sultan (Squares E III-IV). The other areas excavated by Kenyon's Expedition (1952-1958) also provided complete sequences, even though they were not compared and interconnected by the excavators in the final reports. Moreover, they even decided not to go further into a more precise definition of the "Urban Bronze Age", that is the EB II and III. Starting from this, and including results obtained in nine fields, the Italian-Palestinian Expedition has eventually produced a unified periodization based upon stratigraphy of the Early Bronze Age. Without it, no linkage to chronology and other sites is possible.

The Italian-Palestinian Expedition, conversely, for the first time built up an overall periodization of the site (tabs. 5-8), matching together the stratigraphies of all expeditions in all areas. This has become a tremendous tool in the hands of the archaeologists, as the site is an extraordinary accumulation of superimposed cities.

Complete stratigraphic sequences for the Early Bronze Age at Tell es-Sultan were dug in the North-Eastern Trench of John Garstang, later expanded as Square E of Kenyon's excavations, and further on enlarged by the Italian-Palestinian Expedition as Area F, and in Kenyon's Trenches I and III (fig. 5), the latter widened by the Italian-Palestinian Expedition in Areas A (at its bottom) and B (at its top). Other EB strata were uncovered in Areas B-West, E, L, Q and on the Spring Hill in Areas G and D, where however only the phases of Sultan IIIb-d were exposed (fig. 6).



Fig. 5 - View of the Western Section of Kenyon's Trench III, from east.

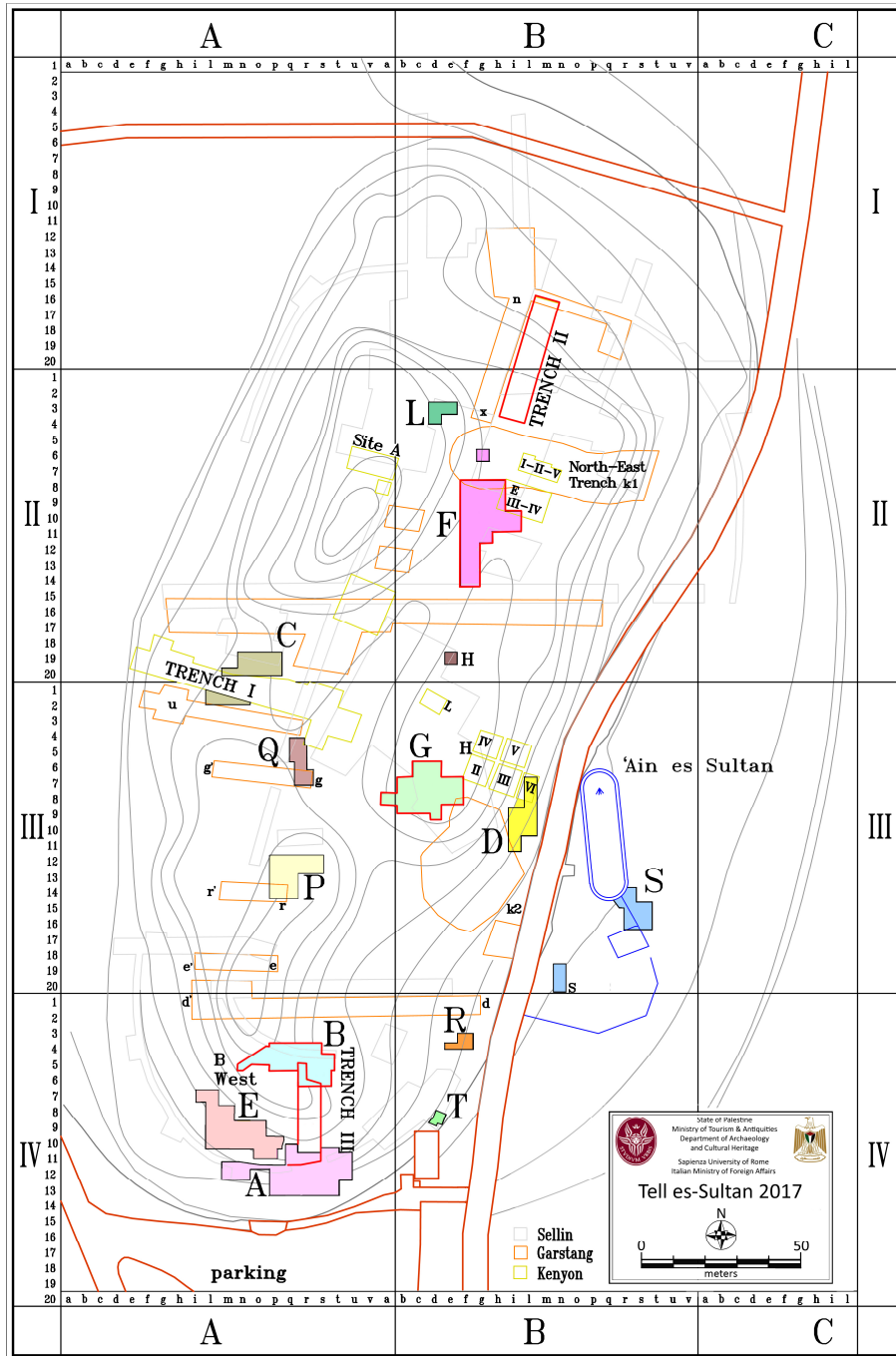


Fig. 6 - Map of Tell es-Sultan/ancient Jericho showing the excavated areas of the four archaeological expeditions.

6.1. Early Bronze I stratigraphy

The settlement of a new group of farmers and shepherds on Tell es-Sultan, bearing a distinguished material culture (round huts, flint industry, pottery) and following a long abandonment and/or an ephemeral occupation during the Chalcolithic Period⁹⁷, characterizes the Early Bronze I.

The Austro-German Expedition directed by E. Sellin and C. Watzinger in 1907-1909 came across EB I layers and structures, but could not clearly define its cultural traits⁹⁸. They, however, collected several important finds including EB IB mace-heads, a palette and numerous pottery fragments⁹⁹.

The earliest identification of two major EB I occupational layers at Tell es-Sultan is due to the British Expedition led by John Garstang, who distinguished this culture in his North-Eastern Trench in two superimposed levels¹⁰⁰ (Level VII, corresponding to EB IA/Sultan IIIa1, and Level VI, i.e. EB IB/Sultan IIIa2), as well as in Tomb A, where the change between secondary and primary burial was documented between the EB IA and IB strata¹⁰¹. Garstang also excavated a shrine (a broad room type mono-cellular temple¹⁰²) and a terrace wall, showing the earliest features of the incipient urbanization.

The following British Expedition, directed by Kathleen M. Kenyon between 1952 and 1958, excavated another portion of the Sultan IIIa village in Squares E III-IV and in Trench II, on both the southern and northern sides of Garstang's North-Eastern Trench¹⁰³. Kenyon uncovered a huge apsidal building, probably devoted to communal activities¹⁰⁴, and excavated eight familiar tombs with major EB I utilization in the nearby necropolis¹⁰⁵ (A13, A84, A94, A114, A124 and A130+A61, K1 and K2).

The Italian-Palestinian Expedition summarized all available stratigraphic data from Tell es-Sultan in an overall synthesis (tab. 5), identifying two sub-periods: Sultan IIIa1 (EB IA, 3500-3200 BC), when a rural village is established and grows on a mound formed by previous Neolithic multi-millennial occupation¹⁰⁶; and Sultan IIIa2 (EB IB, 3200-3000 BC), when this village increases its dimensions and complexity reaching in its last stage of development the physiognomy of an incipient town¹⁰⁷.

⁹⁷ The Chalcolithic occupational gap should be connected with a shift or extinguishment of the Spring of 'Ain es-Sultan and the consequent occupation of the sites of Tell Abu el-'Alayiq North and South on the northern bank of Wadi Qelt and of Tell el-Mafjar on the eastern bank of Wadi Nu'eima, respectively south and east of Tell es-Sultan (Nigro 2014a, 67-68).

⁹⁸ Nigro 2005, 7-14.

⁹⁹ Sellin - Watzinger 1913, fig. 83, pl. 21; Nigro 2005, 12-13, figs. 2.8-2.9a-b.

¹⁰⁰ Nigro 2005, 15-48; Sala 2006, 277-280.

¹⁰¹ Polcaro 2005, 57-70.

¹⁰² Sala 2005b; 2008, 71-79; 2011, 5-6.

¹⁰³ Nigro 2005, 119-128.

¹⁰⁴ Kenyon 1981, 322-325, pls. 313b-314; Nigro 2005, 122-124.

¹⁰⁵ Polcaro 2006, 129-142.

¹⁰⁶ Nigro 2005, 198-199; 2008, 646-650.

¹⁰⁷ Nigro 2005, 200; 2008, 650-653.

Period	Tell					Necropolis
	Garstang	Kenyon				
	NE Trench	E III-IV	Trench I	Trench II	Trench III	
Sultan IIIa1 EB IA 3500-3200 BC	Level VII	DD-R	XXXIV.xxxviii-xl/ XXXV.xli-xliii Wall EO	XIII.xlvi/ XIV.xlvii- xlviii	XI.xxxvi-xxxix/ XII.xl/XIII.xli- xlii	Tombs A13, A84, A94, A114, A124, A130+A61 K1
Sultan IIIa2 EB IB 3200-3000 BC	Level VI	Q-N	XXXVI.xliv/ XXXVII.xlv-xlvi	XV.xlix-li	XIV.xliii-xlv/ XV.xlvi-lix	Tombs A13, K2

Tab. 5 - Stratigraphical correlation between EB I phases identified by the two British Expeditions at Tell es-Sultan (after Nigro 2005, 197, tab. 2).

6.2. Early Bronze II stratigraphy

The four Expeditions which worked at Tell es-Sultan uncovered EB II strata in several spots of the site. The consistency of Sultan IIIb, and its correspondence with the rise of a city was clearly appreciable throughout the site and its stratigraphy.

6.2.1. The Austro-German Expedition (1907-1909)

The Austro-German Expedition exposed EB II layers, which E. Sellin and C. Watzinger attribute to their “Prähistorische Epoche”, in several spots of the site, including structures belonging to the earliest fortifications of the city on the north-western slope of the tell¹⁰⁸ and a round tower abutting from the city-wall on the western side¹⁰⁹.

6.2.2. J. Garstang's Expedition and the identification of two main EB II occupational phases (Levels V-IV)

In 1930-1936, the first British (Marston-Meltchett) Expedition directed by John Garstang excavated extensively EB II layers on the north-eastern *plateau* of the tell, distinguishing two main phases (Levels V and IV), corresponding to periods Sultan IIIb1 (EB IIA, 3000-2850 BC) and Sultan IIIb2 (EB IIB, 2850-2700 BC) of the Italian-

¹⁰⁸ Nigro 2010a, 12-14, figs. 2.2-2.4. EB II structures were exposed in squares C5, C6 and D5 of the Austro-German grid, and at the north-eastern corner of the site in square E8. The same phase was probably reached on the western slope of the Spring Hill (Nigro 2010a, 51-52, pl. XCIII).

¹⁰⁹ The round tower was identified in squares F4-G4 (Nigro 2010a, 25, fig. 2.22).

Palestinian periodization (tab. 6). Nevertheless, Garstang's stratigraphic attributions were not always fully reliable, because of the tell slope eastwards¹¹⁰.

A very important achievement of this expedition was the uncovering of EB II dwellings at the eastern foot of the Spring Hill¹¹¹, in the space between the 'Ain es-Sultan pool and the so-called "East Tower"¹¹², under the modern road. This discovery corroborated the hypothesis, successively demonstrated by the Italian-Palestinian Expedition, that the spring was included into the fortified area of the earliest city¹¹³.

Moreover, Garstang's Expedition was also the first one that excavated tombs in the necropolis used during the Early Bronze II, namely Tomb A and Tomb 24¹¹⁴.

6.2.3. K.M. Kenyon's Expedition: further insights into EB II stratigraphy

K.M. Kenyon exposed EB II strata and recovered associated materials in almost all excavated areas at Tell es-Sultan¹¹⁵. Stratigraphic precision, however, was not always reflected in ceramic sequences (due to the fact that the same layers recognised in sections were not always horizontally distinguished during the excavation and correctly combined with retrieved ceramic fragments). Pottery was, thus, indistinctly attributed to the "Early Bronze Age/urban phase" (=Early Bronze II-III)¹¹⁶.

The Italian-Palestinian Expedition resumed the finds of Kenyon's Expedition and re-attributed them to the two main occupational phases, by grouping stages and strata¹¹⁷, with some interesting highlights on specific changes of major structures (mainly the fortifications), also documenting the progressive extension of the dwelt area in the second main phase of EB II¹¹⁸ (EB IIB/Sultan IIIb2, 2850-2700 BC).

EB II strata were exposed in a considerable extension in Trench I (city-wall), Square M I (city-wall) and in Squares E III-IV (dwelling quarter) on the northern *plateau*. These

¹¹⁰ J. Garstang exposed EB II structures all around the first fortification line (Nigro 2010a, 14-19, 22, figs. 2.5-2.12): to the north-west (trench "P" in squares D5-6, C5-6), to the north-east (trench "k" in squares E7-8), and inside the western city-wall ("point p" in square F5). Ceramic materials dating to the EB II were also retrieved in a probe under the foundations of the EB III Main Inner Wall in square I4 (Nigro 2010a, fig. 2.35).

¹¹¹ Nigro 2010a, 55-57, figs. 3.6-3.9.

¹¹² The East Tower was a massive defensive system possibly connected to a gate giving access to the Spring Hill during the Middle Bronze I (Sultan IV1 period). For a reassessment on the chronology of this defensive structure see: Nigro 2006a, 362, 365-366, fn. 4; 2006b, 26, fig. 38; Fiaccavento - Gallo in press.

¹¹³ Nigro 2010a, 35, fig. 2.34; 2014d, 33; in press, fig. 9.

¹¹⁴ Nigro 2010a, 211-213, 221.

¹¹⁵ In spite of many finds and detailed sequences, Kenyon did not clearly distinguish the periods of EB II and EB III, and also the two main phases of EB II, which, however, can be easily identified in her stratigraphies (Nigro *et al.* 2019, 222-235, table 1). The lack of this distinction provoked a delay of at least two decades (until Arad excavations) in the proper evaluation of the EB II period in Palestine.

¹¹⁶ Kenyon 1957, 167-185.

¹¹⁷ Nigro 2010a, 9; Nigro *et al.* 2019, 223.

¹¹⁸ Nigro 2010a, 23-35, 80-82, 88-91; 2010b, 461-466.

areas and contexts provide the most reliable sequences, which have also been dated by radiocarbon samples. The EB II sub-periods of Sultan IIIb1 and Sultan IIIb2 were dated on the basis of radiocarbon samples to ca. 3050/3000 and 2850 BC (Sultan IIIb1), ca. 2850 and 2650 BC (Sultan IIIb2)¹¹⁹.

Kenyon also excavated four tombs in the necropolis dating from EB II¹²⁰ (A108, A127, A122, and D12, which was kept in use also in EB III).

6.2.4. Sultan IIIb (EB II) in the Italian-Palestinian Expedition (1997-2019) excavations

Sultan IIIb occupational layers were exposed by the Italian-Palestinian Expedition in 1999 and 2000 just west and east of street L.437 in Area F, thus completing the layout of two architectural units, already excavated by previous expeditions in the nearby sectors¹²¹. In 2010, part of a Sultan IIIb2/EB IIB house was brought to light in Area E, just south-west of Kenyon's Trench III, indicating that the dwelt area was considerably extended in the second stage of development of the early city¹²². The north-eastern dwelt quarter was successively re-explored in 2017. In Garstang's room L.135 of the Sultan IIIb1 phase (EB IIA) a cache of Nilotic nacreous shells imported from Egypt was retrieved¹²³.

Some Sultan IIIb finds and stratigraphic data were also collected during the 2009 survey in the area surrounding the Spring of 'Ain es-Sultan, as well as in a bulldozer cut 20 m south of the latter¹²⁴, witnessing the extension of the earliest city.

The Italian-Palestinian Expedition basically confirmed the subdivision of Sultan IIIb period in two main stratigraphic and material culture phases (tab. 6), also providing some new insights into a general interpretation of the city layout.

Period	Garstang	Kenyon					
	NE Trench	E III-IV	H II	Sq. M	Trench III	Trench II	Trench I+ Sq. FI-DI/II
Sultan IIIb1 EB IIA 3000-2850 BC	Level V	L-G	III.iv-v	XX.xcv-xcvi Town Wall I	XVI.lxii-lxvii	XVI.lii/ XVII.lviii	XXXIV.xxxviii -xxxix Town Wall A+B
Sultan IIIb2 EB IIB 2850-2700 BC	Level IV	F-D		XXI.xcvii-ci Town Wall II	XVII.lxviii -lxx	XVIII.lix -lxii	XXXV.xl-xli Town Wall C+D

Tab. 6 - EB II stratigraphical correlations at Tell es-Sultan (after Nigro 2010a, 8, tab. 1.1).

¹¹⁹ Nigro *et al.* 2019, 222-227, tables 4-5.

¹²⁰ Nigro 2010a, 213-224.

¹²¹ Nigro 2010a, 91-96.

¹²² Nigro *et al.* 2011, 584, fig. 14.

¹²³ Nigro in this volume, 83, figs. 4-5; Nigro *et al.* 2018.

¹²⁴ Nigro 2010a, 57-61.

6.3. Early Bronze III stratigraphy

The Early Bronze III (Sultan IIIc) was extensively excavated by the four Expeditions which worked at Tell es-Sultan in several spots of the site, but only the Italian-Palestinian Expedition clearly distinguished two sub-periods, namely Sultan IIIc1 (EB IIIA, 2700-2500 BC) and Sultan IIIc2 (EB IIIB, 2500-2300 BC), with distributive and qualitative features marking the differences between them¹²⁵.

The two sub-periods of Sultan IIIc1 and Sultan IIIc2 were dated on the basis of radiocarbon samples respectively to ca. 2700-2500 BC and ca. 2495 and 2195 BC; the last dates overlap the time span ~2500-2300 BC archaeologically established for Sultan IIIc2/EB IIIB¹²⁶. The two stages have been recognized in Areas B, B-West, F¹²⁷, G (Palace G), Q, R, and in the city-walls in Kenyon's Trenches I (Area C), and III (tab. 7).

Period	Garstang	Kenyon		Italian-Palestinian Expedition	
	NE Trench	Trench I	Trench III	Areas B+ B-West	Area G
Sultan IIIc1 EB IIIA 2700- 2500 BC	Level III	XXXV.xlii-xliii/ XXXVI.xliv Inner Wall E+F+G Outer Wall K-L	XVIII.lxxii-lxxv Inner Wall NFB Outer Wall NFD	Inner Wall W.1 Outer Wall W.56	Palace G
Sultan IIIc2 EB IIIB 2500- 2300 BC	Level II	XXXVII.xlv/ XXXVIII.xlviii-xlix/ XXXIX.l-li/XL.lii Inner Wall H-J Outer Wall M	XIX.lxxvi-lxxvii Inner Wall NFG Outer Wall NFJ	Inner Wall W.2 Outer Wall W.55	

Tab. 7 -Stratigraphical correlation between EB III phases identified at Tell es-Sultan by the two British Expeditions and the Italian-Palestinian Expedition.

The end of the EB III, i.e. the final collapse of the city at the end of Sultan IIIc2 (EB IIIB), is a turning point in the history of Jericho: the first urban experience came at a sudden end, with a general conflagration affecting all of the built-up structures of the city¹²⁸. From a stratigraphic point of view, this resulted in a visible break attested almost everywhere over the site, with burnt and collapse destruction layers¹²⁹.

¹²⁵ Nigro 2009b; Nigro in this volume, §§ 3.-4.

¹²⁶ Nigro *et al.* 2019, 227-235, tables 6-7.

¹²⁷ Sellin - Watzinger 1913, 20-33; Garstang 1930, 128-129; 1931, 191-192; Kenyon 1981, 161-163, 210-213; Marchetti - Nigro eds. 1998, 81-94, 129-130; 2000; Nigro 2006a, 361-375; 2006b, 8-22; 2014a, 73-77; 2016a, 9-12; 2017b, 159-161; Nigro - Taha 2009, 738-741; Nigro *et al.* 2011, 580-581.

¹²⁸ Nigro 2009a, 187-188, figs. 13-14; 2017b, 164-165.

¹²⁹ Nigro 2014a, 77-80, figs. 20-2.

6.4. Early Bronze IV stratigraphy

The last period of the Early Bronze Age, due to its stratigraphic peculiarities, was named “Intermediate Bronze Age” by K.M. Kenyon¹³⁰. It actually sticks out from the preceding and following massive accumulation produced by destroyed mudbrick buildings of the 3rd and 2nd millennium BC urban phases¹³¹.

The Italian-Palestinian Expedition clarified that the EB IV occupation started from the tell summit on the Spring Hill and adjacent tops in an early stage (Sultan IIIId1/EB IVA, 3300-3200 BC), when new groups settled the ruins of the previous city¹³². Then, in the following Sultan IIIId2 (EB IVB, 3200-3000BC), a rural village arose and expanded over the whole tell and its flanks, which were regularized and terraced to host new buildings¹³³.

The two phases are barely attested to in a continuous sequence, as the earliest stage is ephemeral and the tell summit suffered several drastic cuts in the following periods. A clear sequence has been detected only in Area F, Area G, in Trench I/northern section and Trench III (tab. 8).

Period	Garstang	Kenyon		Italian-Palestinian Expedition	
	NE Trench	Trench I	Trench III	Areas F	Area G
Sultan IIIId1 EB IVA 2300- 2200 BC	Level III	XLI.liii	XX.lxxvii	Activity 3a Domestic installations	Early installations
Sultan IIIId2 EB IVB 2200- 2000 BC	Level II	XLII.lvii	XX.lxxviii-lxxx XXI.lxxxii		Dwellings remains

Tab. 8 -Stratigraphical correlation between EB IV phases identified at Tell es-Sultan by the two British Expeditions and the Italian-Palestinian Expedition.

7. CONCLUSIONS

The Jericho sequence, periodization and absolute chronological setting may provide a valid reference grid to other sites, as it combines strata, associated materials and double-checked radiocarbon samples.

Material culture diagnostic markers of each urban period (Early Bronze II and III) are described in the following paper¹³⁴.

Their absolute dates and major features are summarized in the following table 9.

¹³⁰ Kenyon 1966.

¹³¹ Montanari in this volume.

¹³² Marchetti 2003, 303-304; Nigro 2003, 131-132; Nigro *et al.* 2011, 586.

¹³³ Nigro 2003, 132-133.

¹³⁴ Nigro in this volume, 79-108.

Southern Levant periodization	Tell es-Sultan periodization	Architectural features	Material culture diagnostic types
EB IA 3500-3200 BC	Sultan IIIa1	Round huts, bent axis temple; secondary burials in the necropolis	Plain ware, Grey Burnished Ware, beginning of Band Slip Ware, Smearred Wash, Red Polished Ware
EB IB 3200-3000 BC	Sultan IIIa2	Rectangular houses with round corners, double broad-room shrine; primary burials in the necropolis	Red Polished Ware, Band Slip Ware, Smearred Wash, appearance of Line Painted Ware, imported Egyptian items (mace-heads, palettes, flower vases)
EB IIA 3000-2850 BC	Sultan IIIb1	City-wall, city-gates, rectangular houses, main street, market; familiar tombs in the necropolis	Abydos Ware, Red Burnished Ware, stump base jugs, first appearance of sealings on pottery; imported palettes and naureous shells from Egypt; copper weapons
EB IIB 2850-2700 BC	Sultan IIIb2	Horse-shoe towers added to the city-wall	
EB IIIA 2700-2500 BC	Sultan IIIc1	Doubling of city walls, Palace, broad-room temple with round platform; familiar tombs in the necropolis	Khirbet Kerak Ware, Black Burnished bowls Imitation of KKW, Red Polished/Burnished Ware, Metallic pattern-combed Ware, miniature bowls, shallow flat-based bowls, weights, tokens, sea-shells, copper weapons, <i>tournettes</i>
EB IIIB 2500-2300 BC	Sultan IIIc2	Reconstruction of city-walls, Building B1	
EB IVA 2300-2200 BC	Sultan IIId1	Sparse houses on the summit and northern area of the site; shaft tombs in the necropolis (Bead, Dagger, Pottery, Square Shaft, Outsize, Composite Types)	Handmade pottery, hemispherical cups, barrel shaped beakers, envelope ledge-handles
EB IVB 2200-2000 BC	Sultan IIId2	Terracing of city-walls' ruins and filling of ditches, settlement developed along the flanks of the site; shaft tombs in the necropolis (Pottery, Composite Types, Multiple burial)	Fast wheel, pattern combed decoration (horizontal and wavy bands)

Tab. 9 - Archaeological periodization of Early Bronze Age at Tell es-Sultan/Jericho with the architectural and material culture features characteristic for each period.

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[ROSAPAT 13]



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Early Bronze cities across the Jordan

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CONTENTS

Foreword by LORENZO NIGRO.....	iii
LORENZO NIGRO - Archaeological periodization <i>vs</i> absolute chronology: what does not work with high and low Early Bronze Age in Southern Levant.....	1
ANDREA POLCARO - The Jordan Valley and its eastern tributaries at the beginning of the Bronze Age: dolmen fields and settlements in the 4 th millennium BC.....	47
MARTA D'ANDREA - The periodization of Early Bronze IV in the Southern Levant: bridging the gap between stratigraphy and absolute chronology	61
LORENZO NIGRO - Tell es-Sultan/ancient Jericho in the Early Bronze Age II-III	79
ELISABETTA GALLO - Tell es-Sultan/ancient Jericho in the Early Bronze Age I-III: a population estimate	109
DARIA MONTANARI - Tell es-Sultan/ancient Jericho in the Early Bronze Age IV: a summary.....	135
STEVEN COLLINS -The Tall al-Ḥammām city-state in the Early Bronze Age: population and demography, economy and social organization, trade and connectivity.....	155
CARROLL M. KOBS - Tall al-Ḥammām in the Early Bronze Age: the beginning of urbanization	189
GARY A. BYERS - Tall al-Ḥammām in the Early Bronze Age IV: the largest fortified city in the Southern Levant	217
MARIA TAMBURRINI - Reevaluating Early Bronze I Tell es-Sultan in the Southern Jordan Valley in light of recent settlement pattern studies	233
SHARON SABATINI - Olive oil in Southern Levant: rise and fall of an economy in the Early Bronze Age.....	247