

4. Khirbet Kerak Ware at Jericho and the EB III Change in Palestine

Lorenzo Nigro¹
Rome “La Sapienza” University

ABSTRACT

Recent publications of excavations at Khirbet Kerak (e.g. Greenberg et al. 2006) and other sites of the Jordan Valley and Transjordan (such as Beth Shean, Tell esh-Shuna and Khirbet ez-Zeraqon) made available more data on the specialized ceramic production known as Khirbet Kerak Ware (KKW), providing a detailed picture of the typological inventory of shapes and a more accurate stratigraphic setting for its attestations. Ceramic material found at Tell es-Sultan, recently re-examined (Sala 2008b), has stated the existence of a series of local imitations of proper KKW (i.e. that produced at Khirbet Kerak and in northern Palestine). On the other hand, the examination of finds from southern Palestinian sites (et-Tell, Khirbet Yarmouk and Tell ed-Duweir) highlighted a slightly later diffusion of such a production (which in local imitations lasts until early EB IIIB) with a limited variety of shapes (mainly carinated or sinuous-sided bowls). Nonetheless, the diffusion of original KKW is associated in the main urban centres of the Southern Levant with a transformation of the city layout, defences and public architecture (emergence of palaces and the affirmation of a new type of in antis temples), usually marking the passage to EB III.

1. INTRODUCTION²

During the second quarter of the 3rd millennium BC (2750-2500 BC), the major urban centres of Palestine underwent visible changes. These are clearly detected in stratigraphy (from which the archaeological periodization marking the passage to Early Bronze III descends), as well as visible in defensive systems³, in the inner organization of these early cities (with the emergence of palatial structures; Nigro 1994, 5-7, 16-27) and in the architecture of their religious poles (Sala 2008a, 189-290). Such a transformation affected also material culture and is made especially evident by technological standardization and by the diffusion of some specialized ceramic productions (Philip and Baird 2000, 9, 19-21; De Miroschedji 2000a, 320-21). This perspicuous cultural renovation, which was thoroughly discussed by scholars for almost a century, being variously explained and interpreted, has been most frequently attributed to the arrival of new human groups carrying their northern culture (Amiran 1986; Hennessy 1967, 74-76; Lapp 1970, 112, 119-20; Callaway 1978, 47-48; Kempinski 1983, 240; Getzov 2006, 113, 119-21, 131).

In this perspective, the so-called “Khirbet Kerak Ware” - a ceramic production recognized as locally manufactured (Esse and Hotpke 1986; De Miroschedji 2002b, 260) -, characterized by the lustrous red/black slipped surface (Sukenik 1947), by the typical character of the fabric and of methods of manufacture and firing and by the very peculiar shapes of vessels⁴, often with knobs, ridges and other plastic decorations, was

1 Mailing address: Rome “La Sapienza” University, Department of Historical, Archaeological and Anthropological Sciences of Antiquity - Section Near East, Via Palestro, 63, 00185 Roma (lorenzo.nigro@uniroma1.it).

2 A grateful thank is addressed to Dr. Hamdan Taha, General Director of the Department of Antiquities and Cultural Heritage of the Palestinian National Authority: with him and the Italian colleague N. Marchetti I co-directed the Italian-Palestinian Expedition to Tell es-Sultan in the years 1997-2000, when KKW fragments here published were found; I am also grateful to my pupil Maura Sala for discussing with me many issues of this paper.

3 At the beginning of the EB III, fortification systems of Palestinian cities are often strengthened and sometimes doubled with the addition of advanced defensive works, such as, for instance, at et-Tell/’Ai (Callaway 1980, 147-58), Khirbet Yarmouk (De Miroschedji 1990, 58*-60*) and Tell es-Sultan/Jericho (Nigro 2006a, 8-9; 2006b, 369-72, with a comprehensive bibliography).

4 Beside hemispherical bowls with rounded or omphalos base, and stump-based jugs, the Khirbet Kerak inventory includes also sinuous-sided bowls, large carinated kraters and sinuous-sided, sometimes one-handed, jars, as well as biconical stands, andirons, animal shaped-lids and other vessels for special uses (see section 2.1; Amiran 1969, 68-75, pl. 19; Hennessy 1967, 74-79, pls LXII-LXXXIII; Esse 1991, 51-52, pls 4:N, 5, 7).

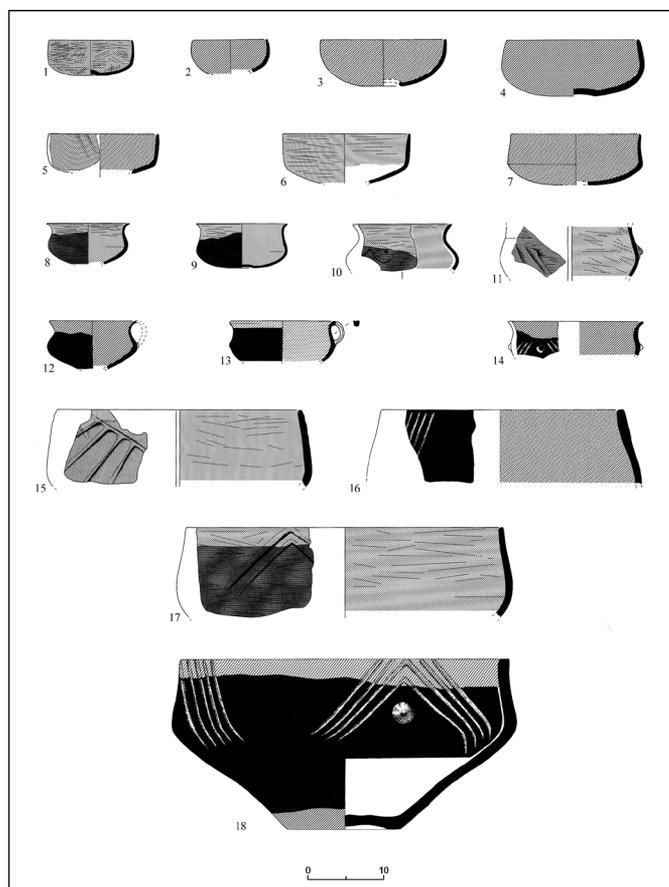


Fig. 1. KKW inventory from Khirbet Kerak: hemispherical bowls, carinated bowls with straight and sinuous sides, craters (after Greenberg *et al.* 2006, figs 2.35:1-4, 3.26:1, 3-4, 8, 5.85:5-7, 5.90:1-2, 5-6, 13, 7.38:17)

identified as the distinguished indicator of such groups, being associated with those changes and appearing as an allogenuous northern-derived element in the stream of local culture development (Amiran 1952; 1965; De Miroschedji 2002b). This picture, albeit with different local adaptations, was thought to characterize the passage to the historical archaeological period named Early Bronze III, which took place around the 27th century BC⁵.

Recent excavations⁶ and studies of old excavations⁷ offered further data, which allow a renewed picture to be drawn of the diffusion and historical significance of this pottery at the mid of the 3rd millennium BC, especially regarding its spread over the southern Jordan Valley. The publication of the report on last century excavations at Khirbet Kerak made also available a wider and more solidly chronologically anchored typology of KKW vessels. Moreover, the evidence from Tell es-Sultan, which has been recently filed and re-examined (Sala 2008b), offers new enlightening insights into the topic.

5 Already in the 1930ies G.E. Wright recognized the appearance of KKW as the characteristic mark of the beginning of EB III (Wright 1937, 72-8; Hennessy 1967, 88; Esse 1991, 53, 64-7; Stager 1992, 39; De Miroschedji 2002b, 258; Zuckerman 2003, 180-1; *contra* Getzov 2006, 113).

6 Such as those carried out at Khirbet ez-Zeraqon (Genz 2002) in Transjordan and Khirbet Kerak (Getzov 2006) and Tell es-Sultan/Jericho (Marchetti and Nigro 2000), respectively in the Upper and Lower Jordan Valley. Excavations were resumed also at Tell el-Mutesellim/Megiddo (Joffe 2000, 174-81, 184) and Beth Shean (Mazar *et al.* 2000), where further KKW fragments were found.

7 Namely the publication of the soundings carried out in the 1953 by J. Mellaart at Tell esh-Shuneh Mashawah (Leonard 1992, 34-63) and the recent publication by R. Greenberg and S. Paz of previous excavations at the main site of Khirbet Kerak from 1933 to 1986 (Greenberg and Paz 2004; Greenberg *et al.* 2006).

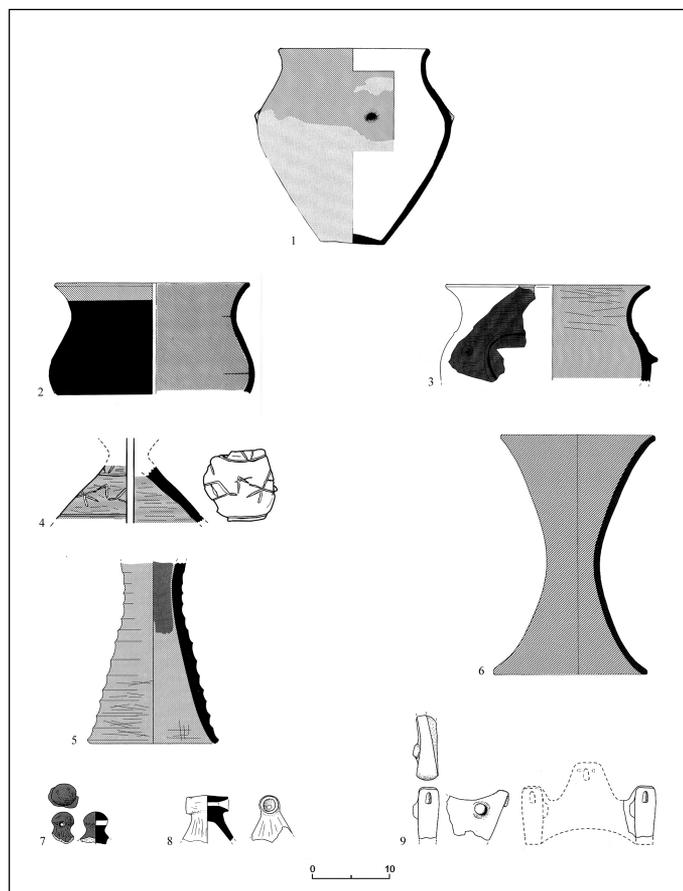


Fig. 2. KKW inventory from Khirbet Kerak: sinuous-sided jars, biconical stands, lids and andirons (after Greenberg *et al.* 2006, figs 2.35:5-6, 9, 3.26:9-10, 3.27:3-4, 9, 4.4:3, 5.85:16)

2. KHIRBET KERAK WARE AT KHIRBET KERAK: TYPOLOGICAL AND CHRONOLOGICAL OVERVIEW

Recent publications of excavations at Khirbet Kerak in the last century (1933-1986; 1994-1996) illustrates a virtual complete inventory of KKW vessels retrieved in various spots of the site⁸.

2.1 TYPOLOGICAL OVERVIEW

In a very simplified synthesis, aiming at pointing out historical-archaeological elements, descending from the study of such a specialized ceramic production, the commonest shapes are the following:

- hemispherical bowls with pointed rim and rounded or omphalos base, usually monochrome with a red or reddish-brown highly burnished slip on both interior and exterior (Fig. 1:1-4);
- carinated bowls with straight sides, simple or pointed rim and rounded or omphalos base, usually monochrome with a red or reddish-brown highly burnished slip on both interior and exterior; some specimens of this type have also a plastic decoration consisting of one or two oblique ridges (Fig. 1:5-7);
- sinuous-sided bowls with everted rim and flat or omphalos base with a red lustrous slip inside and

⁸ Esse 1991, 51-52, pls 4:N, 5, 7; Getzov 2006, 67, 86-93, pls 3.50-3.51, 3.52:16-20, 3.53; Greenberg *et al.* 2006, 31, 45-46, 71-78, 95-96, 141, 297-98, 300, 373-75, figs 2.17:4, 2.35, 2.36:1, 2.37, 3.10-3.11, 3.13, 3.16, 3.26-3.28, 3.46:4-5, 3.47:11-12, 4.4, 5.85-5.86, 5.90, 5.91:15-23, 5.92:2, 11, 5.95:13, 5-9, 6.29:10, 6.30:9-12, 6.31:1, 5-9, 14-17, 6.32:5, 6.33:13-15, 6.34:9-11, 7.17, 7.38:17-18, 20, 7.40:2, 6-7, 7.42:8, 7.44:2-10, 7.45:9-11, 7.46:5-15, 17-19, 7.47:2, 6, 9, 13, 15, 7.48:1-4, 6-9, 8.88:8-9, 8.90:3, 8.95, 8.97, 8.98:8-11, 8.99:4-6, 10, 8.100:4, 6, 9, 8.101:2-3, 9-10, 8.103:7-8, 8.104:1, 9, 8.105:2-3, 9-10, 8.106:3, 12-16.

outside over the rim and black lustrous outside; sometimes decorated with fluting or knobs applied on girth on the outer wall and supplied with handles (Fig. 1:8-14);

- platters and open bowls with red burnished slip inside and outside;
- upright craters (carinated to some degree) with plastic/fluted decoration and usually with the distinctive bicolor red/black surface (Fig. 1:15-18);
- jars with sinuous-sided profile, usually red lustrous inside and outside over the rim and black lustrous outside, sometimes with knob decoration on the shoulder (Fig. 2:1-3);
- jugs with stump base and ribbon handle (quite rare);
- hole-mouth jars (rare) with red interior and black or grey exterior;
- pithoi (rare);
- biconical stands with ridged (sometimes fenestrated) trumpet foot, usually red burnished on interior and exterior and sometimes incised with geometric/animalistic motives filled with white paste (Fig. 2:4-6);
- andirons and other shapes (such as conical lids surmounted by pierced knobs, trays, etc.) for special uses (Fig. 2:7-9).

Bowls represent the vast majority of the corpus and usually show the classic lustrous bicolor red and black-slipped surface with the red to black colour change of the outer wall (commonly black outside and red inside with a red band on the rim). Craters and sinuous-sided jars are important types in the inventory too, as well as jugs with a stump base and ribbon handle (which, however, are also attested in the contemporary Simple and Red-Polished Ware inventories; Kenyon and Holland 1983, figs 56:22, 143:4, 146:10, 33). Stands, andirons, lids and other special shapes (like cylindrical vessels; Greenberg *et al.* 2006, fig. 3.28) illustrate a variety of types for cultic and specialized domestic contexts. Knobs, ridges, indented and plastic decorations, as well as carination and the peculiar morphology of the open shapes, suggest a metal prototype for this production.

2.2 CHRONOLOGICAL OVERVIEW

A second element provided by recent publication of excavations at Khirbet Kerak is the well defined stratigraphic setting of contexts where it was found, thus offering a more accurate chronological reference for this ware, which appears with the passage to Phase D (EB III), when it reaches its peak of attestations, thus confirming its role of diagnostic indicator of the beginning of EB III⁹.

This pattern of development with KKW as a distinct hallmark of EB IIIA is also well attested to in the other main sites of northern Palestine, such as Beth Shean (Fitzgerald 1934, 129-31; Mazar *et al.* 2000, 256-57, 260-65), Tell esh-Shuna (Leonard 1992, 34, 49-55), Hazor (Greenberg 1997a, 17, 21; 1997b, 187; 2000, 187-91), Tell el-Mutesellim/Megiddo (Joffe 2000, 174), Yaqush (Esse 1990, 223) and recently Khirbet ez-Zeraqon and Khirbet al-Batrawy in Transjordan¹⁰.

A special mention deserves Khirbet ez-Zeraqon, where the presence of KKW (Genz 2002, 30-31, 39-40, 44, pls 4:3, 21:9-11, 38:2, 117:2, 148:A, 159:B) is associated with an overall reassessment of the public sector of the upper city with the erection of broad-room *in antis* temples (Genz 2002, 94-96, fig. 2; Sala 2008a, 190-92, 243-48, figs 51, 71, pl. 19). These sacred buildings exhibit a type attested to in religious architecture of the whole Syro-Palestinian region from the mid 3rd Millennium BC

⁹ According to Getzov and his excavation results, KKW appears later in stratum II (Getzov 2006, 113, 118) that is in an advanced stage of EB IIIA; he thus stresses the presence of KKW in EB IIIB strata. This may depend on specific stratigraphic situations noticed in the areas of his excavations; a similar situation was not recorded in the numerous other excavation areas, where KKW always appear as the clearest hallmark of EB IIIA (Greenberg *et al.* 2006, 300, 373-74).

¹⁰ Recent Rome "La Sapienza" excavations at Khirbet al-Batrawy, an EB II-III fortified town in the Upper Wadi Zerqa, have discovered a few KKW fragments in a clear stratigraphic setting; that is in the EB IIIA destruction layer and in the levelling layer just below the EB IIIB street outside the city-wall. Khirbet al-Batrawy, thus, represents the easternmost site where KKW appears to be attested (Nigro (ed.) 2008, 69, note 14).

3. KHIRBET KERAK WARE AT TELL ES-SULTAN/JERICHO AND IN SOUTHERN PALESTINE

The re-examination of KKW at Jericho (Sala 2008b) in the light of the finds of the Italian-Palestinian Expedition in Area F (Nigro 2000, 30, fig. 1.39; 2006a, 15-16, fig. 23), the EB IIIA dwelling quarter excavated in the years 1998-2000 on the northern plateau of the tell (Nigro 2000; 2006a, 10-17), to the south of Garstang's north-eastern trench (Garstang *et al.* 1935; 1936) and to the south-west of Kenyon's squares EIII-IV (Kenyon 1981, 309-38), brought about several interesting observations both from the typological and the chronological point of view. These data allow to draw interpretive conclusions on the diffusion and significance of KKW in southern Palestine and Transjordan.

3.1 KHIRBET KERAK WARE TYPES AT TELL ES-SULTAN

In spite of the significant number of attestations (up to seventy specimens; Sala 2008b), the typological variety of KKW shapes at Tell es-Sultan is restricted compared to the assemblage of Khirbet Kerak. Carinated bowls with straight sides and inner/outer red lustrous slip, or sinuous-sided bowls with central omphalos and the distinct red/black change of the lustrous slip represent the vast majority of the KKW Jerichoan corpus, even though little jars with sinuous-side profile, craters and jugs are also attested. Actually, the inventory of KKW from Tell es-Sultan is various¹¹, though within an almost unique broad functional class - that of carinated bowls.

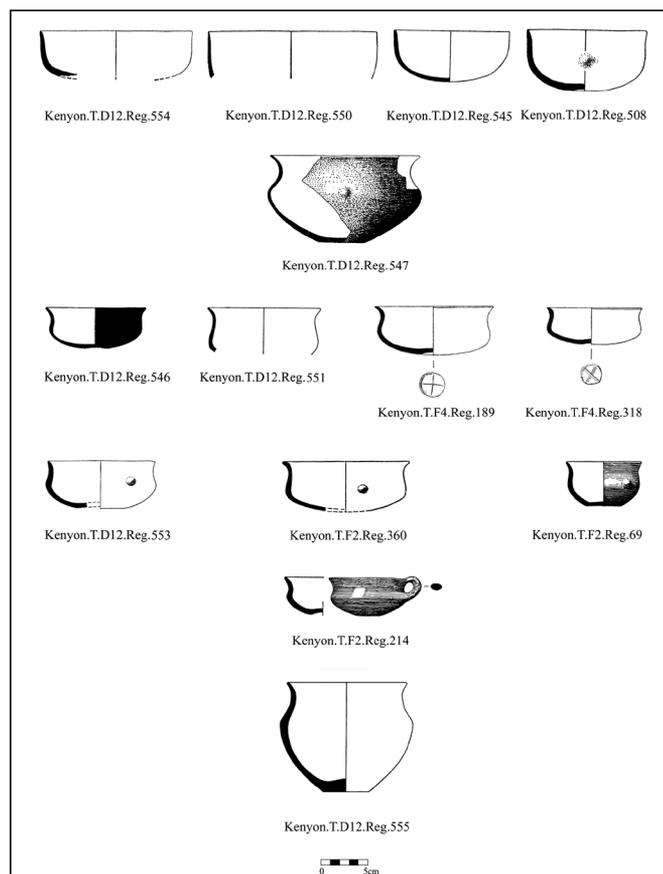


Fig. 3. KKW bowls and jar retrieved by K.M. Kenyon in Tombs D12, F4 and F2 (after Kenyon 1960, figs 38:27-35, 44:10-11, 57:41-43)

¹¹ M. Sala (2008b) has stressed the significant number of Jericho KKW attestations (at least 70 vessels in the published records, plus some feasible local imitations), pointing out the relevance of such number in southern Palestine.

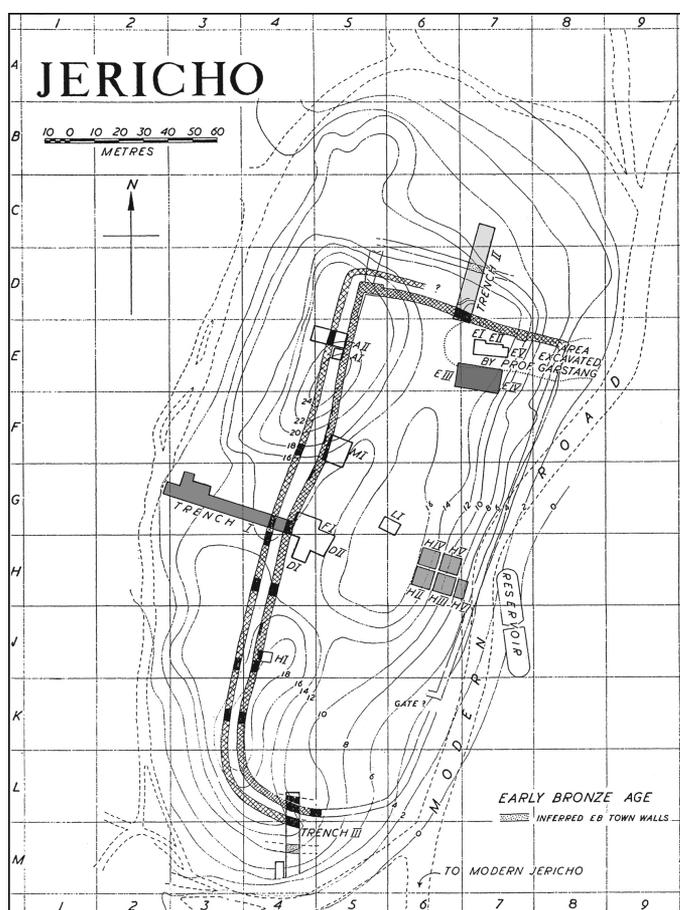


Fig. 4. General plan of the EB III city of Tell es-Sultan with the double fortification wall excavated by the Austro-German and British Expeditions and with indicated the sectors of Kenyon's excavations where KKW specimens were retrieved (after Kenyon 1981, fig. 3)

They usually belong to the slightly carinated type with straight¹² or sinuous¹³ sides and varying both in depth and rim inclination; they sometimes exhibit ridges or knobs on the girth on the outer wall. What seems more significant is the prevalence in the Jerichoan pottery inventory from the tell of totally red burnished exemplars, the black outer surface being mainly attested on craters (Nigro 2000, fig. 1:39,4) and jugs (Nigro 2000, fig. 1:39,2-3) and on the sinuous-sided bowls and jars from the contemporary tombs in the necropolis (Garstang's Tomb A, and Kenyon's Tombs D12, F4 and F2; see below).

3.2 LOCAL IMITATION OF KHIRBET KERAK WARE

A second observation was the distinction between original KKW, probably imported from the north (De Miroschedji 2002b, 260) and mainly retrieved in contemporary tombs (Fig. 3), and local imitations¹⁴, which are distinguished by the lower firing resulting in a dull red or greyish less brilliant burnished slip

12 Garstang *et al.* 1935, pl. XXVIII:12-12b, 15-16; Kenyon and Holland 1983, 374, fig. 147:12.

13 Garstang *et al.* 1935, pl. XXVIII:10, 18-20; Kenyon and Holland 1983, 374, fig. 147:13.

14 KKW imitation is attested mainly in southern Palestine. Parallels are found, for instance, at et-Tell (Amiran 1967; Callaway 1972, 257-58, fig. 60:8, 11; 1980, figs 108:18-19, 22; 125:46), Tell el-Umeri (Harrison 2000, figs 5.14:32, 5.22:4-6), Nizzanim (stratum 2; Yekutieli and Gophna 1994, fig. 8:7-8), Khirbet Yarmouk (De Miroschedji 2000a, 328, fig. 18.5:4-5), Tell ed-Duweir (Tufnell 1958, pls 13:82, 66:407), Tell el-Hesi (Petrie 1891, pl. V:26, 39-40) and Bab edh-Dhra' (Rast and Schaub 1989, 388, 439, fig. 245:20).

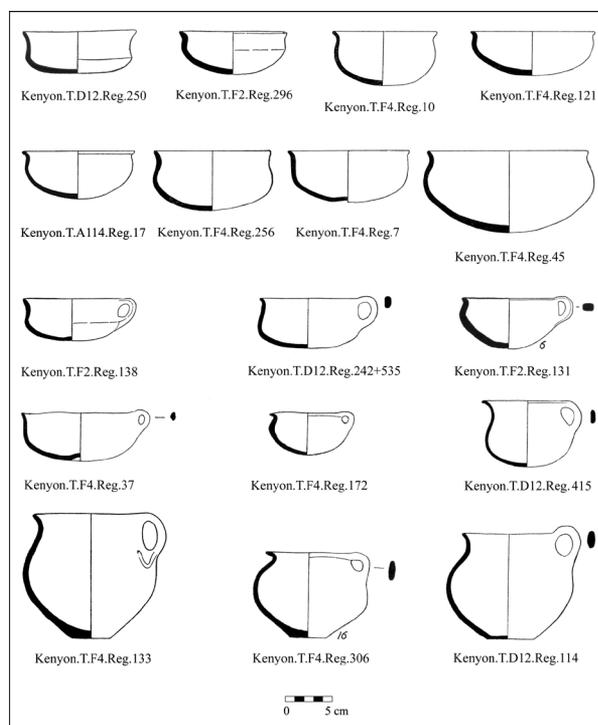


Fig. 5. Local imitations inspired by KKW shapes retrieved by K.M. Kenyon in Tombs D12, F4, F2 and A114 (after Kenyon 1960, figs 33:1, 36:19, 21-22, 43:21-25; 44:15-18, 57:13, 58:6-7, 67:6)

ware, which adopted some open shapes (mostly carinated and sinuous-sided bowls) typical of KKW inventory. These imitations were first recognized by K.M. Kenyon, who retrieved several local specimens inspired to KKW prototypes on the tell (Fig. 4)¹⁵.

Rare original KKW specimens appear in the earliest Sultan IIIc1 (EB IIIA) layers on the site¹⁶ and, above all, in some tombs of the necropolis, namely in Tomb A excavated by J. Garstang¹⁷ and in Tombs D12, F4 and F2 excavated by Kenyon (Fig. 3)¹⁸. However, other bowls found in Garstang's Tomb A¹⁹ in a slightly later layer are more likely to be local imitations²⁰. Similar specimens were retrieved also by Kenyon in Tomb D12 (Kenyon 1960, fig. 33:1), Tomb F4 (Kenyon 1960, fig. 43:21-25), Tomb F2 (Kenyon 1960, fig. 57:13) and Tomb A114 (Kenyon 1960, fig. 67:6) and they were interpreted by the archaeologist as local imitations somewhat inspired by KKW shapes (Fig. 5). Finally, a small one-handled jar with sinuous-sided profile retrieved from Tomb F4 (Kenyon 1960, fig. 44:15) also belongs to this group, as well as some one-handled bowls with sinuous-sided profile from Tomb D12 (Kenyon 1960, fig. 36:19, 21-22), Tomb F4 (Kenyon 1960, fig. 44:16-18) and Tomb F2 (Kenyon 1960, fig. 58:6-7).

15 These vessels belong to the sinuous-sided bowl type with everted rim, and reddish or reddish-brown burnished slip on interior and exterior (Sala 2008, fig. 5:3-8); they were found in Trench I (Kenyon and Holland 1983, fig. 18:25-26), Trench II (Kenyon and Holland 1982, fig. 57:16; 1983, fig. 64:4) and in Area H on the eastern side of the Spring Hill (Kenyon and Holland 1982, fig. 57:15; 1983, fig. 155:3).

16 Garstang *et al.* 1935, pl. XXVII:7, 12b, 17, 19, 21; Kenyon and Holland 1983, 374, fig. 147:12-13.

17 In Tomb A, an one-handled carinated jar with two knobs applied opposite the handle, red slipped and burnished inside, black slipped and burnished outside, was retrieved (Garstang 1932, pl. VI:11).

18 In tombs excavated by K.M. Kenyon KKW hemispherical bowls and carinated bowls with sinuous-side profile (Kenyon 1960, figs 38:28-35, 44:10-11, 57:41-43) and a little jar with sinuous-side profile and flat base (Kenyon 1960, fig. 38:27) were retrieved.

19 They are a few bowls with a sinuous-sided profile and red slipped surface (Garstang 1932, pls III:9, 10, 12 and VI:1).

20 J.B. Hennessy did already suggest this (1967, note 1).

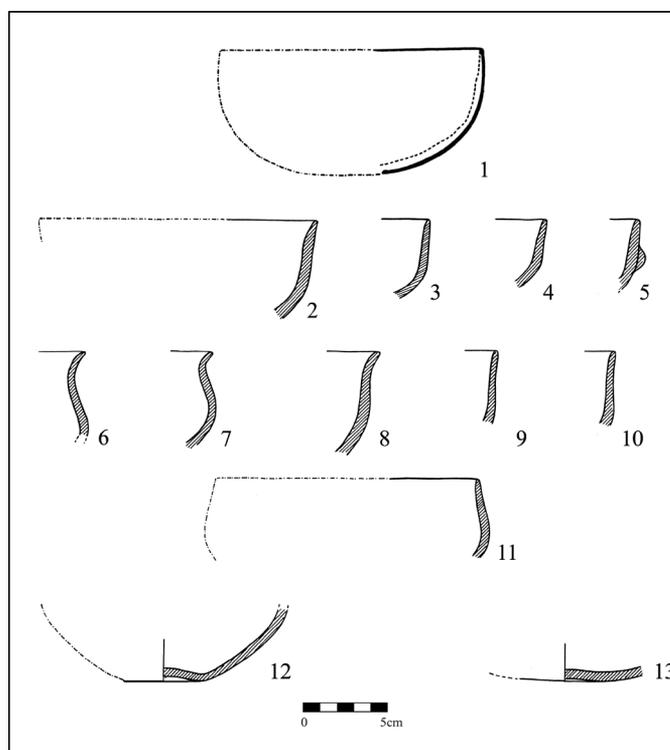


Fig. 6. KKW assemblage from house 109 excavated by J. Garstang in 1935 (after Garstang *et al.* 1935, pls XXVII:7; XXVIII:10, 12, 12b, 15-20, 23; XXIX:21-22)

The local imitation of KKW is, in fact, predominantly attested in late Sultan IIIc1 (EB IIIA) layers on the tell, where Jerichoan KKW and Red-Polished Ware represent the commonest specialized ceramic productions in the ordinary domestic pottery assemblage²¹. While the former is preferred for carinated bowls, the latter includes more platters with radial burnishing and spherical jugs²²; jugs with ribbon handle and stump base are known either in Simple, Red-Polished or KKW. Local KKW is less frequently present in tomb furnishings, thus probably indicating its lesser value relative to the original one.

3.3 FINDS OF THE ITALIAN-PALESTINIAN EXPEDITION

The excavation of a large portion of the domestic quarter on the northern plateau by the Italian-Palestinian Expedition (Area F; Nigro 2000; 2006a, 5-6, 10-17) provided a variety of KKW specimens, illustrating both original KKW and local imitation. A black stump-base jug with ribbon handle found in house L.305 (TS.98.F.148/1a, TS.98.F.148/1b and TS.98.F.148/2; Nigro 2000, 30, fig. 1:39,2-3) is one of the most noticeable pieces of KKW, as well as the fragment of a large crater with ridged decoration (TS.98.F.148/4; Nigro 2000, 30, fig. 1:39,4), and a slightly carinated bowl with inverted sides and pointed rim, which shows the distinct red/black colour change of the lustrous slip below the rim (TS.98.F.148/3; Nigro 2000, 30, fig. 1:39,1); while the fragments of two bowls with straight sides, pointed rim and a reddish-brown burnished slip on both interior and exterior (TS.99.F.236/13 and TS.99.F.236/14) seem to represent KKW specimens of local manufacture (Figs 7-8).

²¹ A very interesting discovery is the concentration of KKW vessels in house 109 excavated by J. Garstang in the north-eastern trench (Fig. 6): here a number of KKW fragments was found in Garstang's level III (Garstang *et al.* 1935, 154-55, pls XXVII:7, XXVIII:10, 12-12b, 15-20, 23 and XXIX:21-22).

²² Like the one retrieved by the Italian-Palestinian Expedition in house L. 403 (Nigro 2006a, fig. 22).

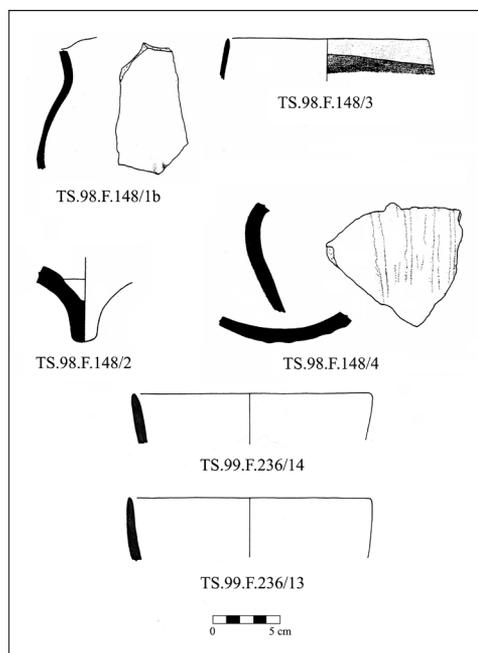


Fig. 7. KKW fragments retrieved by the Italian-Palestinian Expedition in house L.305 in 1998-1999 (Archives of the Italian-Palestinian Expedition)

Another conspicuous group of KKW vessels comes from house L.303 (Figs 9-10)²³ and it includes: slightly carinated bowls with straight sides and red or reddish-brown burnished slip on both interior and exterior (TS.99.F.215.15, TS.99.F.215.17, TS.99.F.221/3 and TS.99.F.227/1), sometimes with plastic decoration consisting of an outer oblique ridge and a knob (as in specimen TS.99.F.215.13/a)²⁴; sinuous-sided bowls with a gentle profile and an inner and outer reddish burnished slip (TS.99.F.215/14 and TS.99.F.221/4), probably a local KKW manufacture, comparable with the above mentioned examples, which Kenyon retrieved on the tell; two fragments of craters (TS.99.F.215/18 and TS.99.F.221/6) and the upper part of a small sinuous-sided jar with inner and outer reddish-brown burnished slip (TS.99.F.227/7), also possibly of local production.



Fig. 8. KKW fragments retrieved by the Italian-Palestinian Expedition in house L.305 in 1998 (Archives of the Italian-Palestinian Expedition)

²³ The fragments were found on different superimposed floors of the house, all datable to the EB IIIA.

²⁴ One of these bowls shows also the characteristic red/black colour change of the outer slip (TS.99.F.215/16).

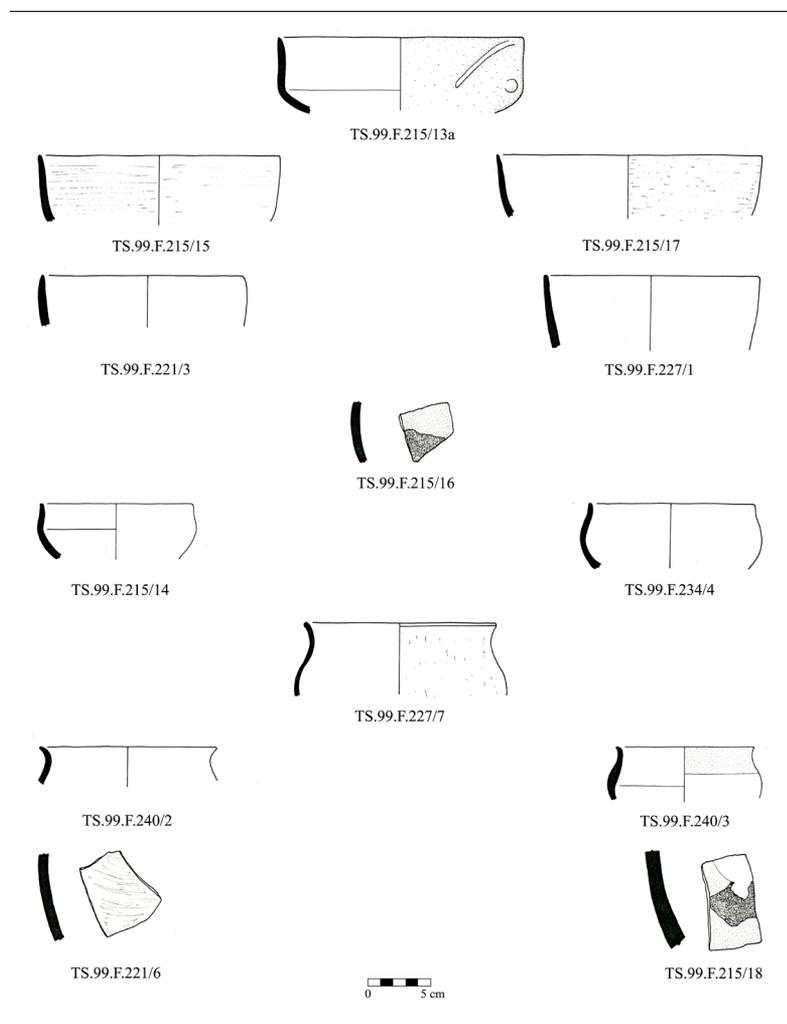


Fig. 9. KKW fragments retrieved by the Italian-Palestinian Expedition in house L.303, unit L.444 and street L.307 in 1999 (Archives of the Italian-Palestinian Expedition)

One other fragment of a sinuous-sided bowl (TS.99.F.234/4) with a gentle profile and a reddish-brown burnished slip on both interior and exterior was retrieved from unit L.444; and two fragments of small jars with sinuous-sided profile (TS.99.F.240/2 and TS.99.F.240/3) were retrieved in the upper filling of street L.307.

Altogether around 21 fragments of original KKW and local imitations were retrieved by the Italian-Palestinian Expedition in the EB IIIA dwelling quarter on the northern-eastern plateau of the mound (Area F), namely from house L.305 (pottery units TS.1998.F.148 and TS.1999.F.236), house L.303 (pottery units TS.1999.F.215, TS.1999.F.221 and TS.1999.F.227), unit L.444 on the western side of street L.307 (pottery unit TS.1999.F.234) and from the upper filling of street L.307 (TS.1999.F.240).

4. CONCLUSIONS

Recent discoveries and the study of old excavations allow to distinguish between the North of Palestine, where KKW emerged at the passage to EB III, at the time when important cultural changes affected the region, and the South, where the KKW tradition emerged in the second half of EB IIIA, in certain cases also lasting in the



Fig. 10. KKW bowls retrieved by the Italian-Palestinian Expedition in house L.303 in 1999 (Archives of the Italian-Palestinian Expedition)

following EB IIIB²⁵. It is not possible to associate systematically KKW with other cultural traits (architecture, cult, etc.). However, it seems significant that this allogeous tradition occurred in major sites of the region together with the appearance of *in antis* broad-room temples, previously not attested in the Southern Levant²⁶, and apparently of similar northern influx.

BIBLIOGRAPHY

Amiran, R. 1952. Connections between Anatolia and Palestine in the Early Bronze Age. *Israel Exploration Journal* 2, 89-103

Amiran, R. 1965. Yanik Tepe, Shengavit and the Khirbet Kerak Ware. *Anatolian Studies* 15, 165-76

Amiran, R. 1967. Khirbet Kerak Ware at Ai. *Israel Exploration Journal* 17, 185-86

Amiran, R. 1969. *Ancient Pottery of the Holy Land from its beginning in the Neolithic Period to the end of the Iron Age*. Jerusalem: Massada Press Ltd.

Amiran, R. 1986. The Fall of the Early Bronze Age II City of Arad. *Israel Exploration Journal* 36, 74-76

Callaway, J.A. 1972. *The Early Bronze Age Sanctuary at Ai (et-Tell). No. I: A Report of the Joint Archaeological Expedition to Ai (et-Tell)*. Cambridge, MA: American Schools of Oriental Research

Callaway, J.A. 1978. New Perspectives in Early Bronze Age III in Canaan. In P.R.S. Moorey and P. Parr (eds), *Archaeology in the Levant: Essays for Kathleen Kenyon*, 46-58. Warminster: Aris and Phillips Ltd.

Callaway, J.A. 1980. *The Early Bronze Age Citadel and Lower City at Ai (et-Tell): A Report of the Joint*

²⁵ At Khirbet Yarmouk, for instance, KKW is apparently attested only in EB IIIB strata/contexts, but before the latest EB III contexts (EB IIIC in De Miroschedji's terminology; De Miroschedji 2000a, 328). Similarly, at Tell ed-Duweir, in the "North-East Section", KKW appears in the central EB III levels (later than the beginning of the Early Bronze III, but before the so-called "post Khirbet Kerak" EB III phase; Tufnell 1958, 44, 51, figs 1, 4, pl. 96).

²⁶ This temple form is introduced in the Southern Levant during EB III (Sala 2008a, 190-200), namely at Byblos (Dunand 1950-1958, 895-98, fig. 1007, pls XXXVII, XLII:3; Sala 2008c), and in northern Palestine at Tell el-Mutesellim/Megiddo (Loud 1948, 78-84, figs 179-186, 394; Sala 2008a, 219-40) and Khirbet ez-Zeraqon (Genz 2002, 94-96, fig. 2; Sala 2008a, 190-92, 243-48, figs 51, 71, pl. 19).

- Archaeological Expedition at Ai (et-Tell). No. II.* Cambridge, MA: American Schools of Oriental Research
- Dunand, M. 1950-1958. *Fouilles de Byblos. Tome II. 1933-1938.* Paris: Libraire d'Amérique et d'Orient Adrien Maisonneuve
- Esse, D.L. 1990. Tel Yaqush: Notes and News. *Israel Exploration Journal* 40, 222-23
- Esse, D.L. 1991. *Subsistence, Trade and Social Change in Early Bronze Age Palestine.* Studies in Ancient Oriental Civilizations – SAOC 50. Chicago: Oriental Institute of the University of Chicago
- Esse, D.L. and Hopke, P. 1986. Levantine Trade in the Early Bronze Age: From Pots to People. In J. Olin and M.J. Blackman (eds), *Proceedings of the 24th International Archaeometry Symposium*, 327-39. Washington: The Smithsonian Institution Press
- Fitzgerald, G.M. 1934. Excavations at Beth-Shan in 1933. *Palestine Exploration Fund. Quarterly Statement*, 123-34
- Garstang, J. 1932. Jericho: City and Necropolis. *Liverpool Annals of Archaeology and Anthropology* 19, 3-22, 35-54
- Garstang, J., Droop, J.P. and Crowfoot, J. 1935. Jericho: City and Necropolis (Fifth Report). *Liverpool Annals of Archaeology and Anthropology* 22, 143-84
- Garstang, J., Ben-Dor, I. and Fitzgerald, G.M. 1936. Jericho: City and Necropolis (Report for the Sixth and Concluding Season, 1936). *Liverpool Annals of Archaeology and Anthropology* 23, 67-100
- Genz, H. 2002. *Die frühbronzezeitliche Keramik von Khirbet ez-Zeraqon.* Abhandlungen des Deutschen Palästina-Vereins, Band 27 (2). Wiesbaden: Harrassowitz Verlag
- Getzov, N. 2006. *The Tel Bet Yerah Excavations 1994-1995.* Israel Antiquities Authority Reports 28. Jerusalem: Israel Antiquities Authority
- Greenberg, R. 1997a. Area A. The Early Bronze Age. Strata 11-10. In A. Ben-Tor and R. Bonfil (eds), *Hazor V. An Account of the Fifth Season of Excavation, 1968*, 17-23. Jerusalem: Israel Exploration Society
- Greenberg, R. 1997b. The Early Bronze Age Phases in Area L. Strata XXI-XIX. In A. Ben-Tor and R. Bonfil (eds), *Hazor V. An Account of the Fifth Season of Excavation, 1968*, 183-93. Jerusalem: Israel Exploration Society
- Greenberg, R., 2000. Changes in Ceramic Production between Early Bronze Age II and III in Northern Israel, Based on the Pottery of Tel Hazor and Tel Dan. In G. Philip and D. Baird (eds), *Ceramics and Change in the Early Bronze Age of Southern Levant*, 183-99. Levantine Archaeology 2. Sheffield: Sheffield Academic Press
- Greenberg, R. and Paz, S. 2004. An EB IA-EB III Stratigraphic Sequence from the 1946 Excavations at Tel Beth Yerah. *Israel Exploration Journal* 54, 1-23
- Greenberg, R., Eisenberg, E., Paz, S. and Paz, Y. 2006. *Bet Yerah: The Early Bronze Age Mound I: Excavations Reports 1933-1986.* Israel Antiquities Authority Reports 29. Jerusalem: Israel Antiquities Authority

- Harrison, T.P. 2000. Field D: The Lower Southern Terrace. In D.R. Clark, L.T. Geraty, L.G. Herr, Ø.S. LaBianca and R.W. Younker (eds), *Madaba Plains Project 4: The 1992 Season at Tell el-'Umayri and Subsequent Studies*, 95-154. Michigan: Andrews University Press and the Institute of Archaeology
- Hennessy, J.B. 1967. *The Foreign Relations of Palestine during the Early Bronze Age*. London: Colt Archaeological Institute Publications
- Joffe, A.H. 2000. The Early Bronze Age Pottery from Area J. In I. Finkelstein, D. Ussishkin and B. Halpern (eds), *Megiddo III. The 1992-1996 Seasons*, 161-85. Monograph Series of the Institute of Archaeology of Tel Aviv University 18. Tel Aviv: Tel Aviv University
- Kempinski, A. 1983. Early Bronze Age Urbanization of Palestine: Some Topics in a Debate. *Israel Exploration Journal* 33, 235-41
- Kenyon, K.M. 1960. *Excavations at Jericho. Volume One. The Tombs excavated in 1952-1954*. London: The British School of Archaeology in Jerusalem
- Kenyon, K.M. 1981. *Excavations at Jericho. Volume Three. The Architecture and Stratigraphy of the Tell*. London: The British School of Archaeology in Jerusalem
- Kenyon, K.M. and Holland, T.A. 1982. *Excavations at Jericho. Volume Four. The Pottery Type Series and Others Finds*. London: The British School of Archaeology in Jerusalem
- Kenyon, K.M. and Holland, T.A. 1983. *Excavations at Jericho. Volume Five. The Pottery Phases of the Tell and Others Finds*. London: The British School of Archaeology in Jerusalem
- Lapp, P.W. 1970. Palestine in the Early Bronze Age. In J.A. Sanders (ed.), *Near Eastern Archaeology in the Twentieth Century: Essays in Honor of Nelson Glueck*, 101-31. Garden City: Doubleday
- Leonard, A. 1992. *The Jordan Valley Survey, 1953: Some Unpublished Soundings Conducted by James Mellaart*. Annual of the American Schools of Oriental Research 50. Winona Lake: Eisenbrauns
- Loud, G. 1948. *Megiddo II. Seasons of 1935-39*. Oriental Institute Publications 62. Chicago: University of Chicago Press
- Marchetti, N. and Nigro, L. (eds) 2000. *Excavations at Jericho, 1998. Preliminary Report on the Second Season of Excavations and Surveys at Tell es-Sultan, Palestine*. Quaderni di Gerico 2. Roma: Università di Roma "La Sapienza"
- Marro, C. and Hauptmann, H. (eds), *Chronologie des pays du Caucase et de l'Euphrate aux IV^e-III^e millénaires. Actes du Colloque International d'Istanbul, 16-19 décembre 1998*. Varia Anatolica XI. Paris: Institut Français d'Etudes Anatoliennes d'Istanbul
- Mazar, A., Ziv-Esudri, A. and Cohen-Weinberger, A. 2000. The Early Bronze Age II-III at Tel Beth Shean: Preliminary Observations. In G. Philip and D. Baird (eds), *Ceramics and Change in the Early Bronze Age of Southern Levant*, 255-78. Levantine Archaeology 2. Sheffield: Sheffield Academic Press

Miroschedji, P. de 1990. The Early Bronze Age Fortifications at Tel Yarmut - An Interim Statement. *Eretz Israel* 21, 48*-61*

Miroschedji, P. de 2000a. An Early Bronze Age III Pottery Sequence for Southern Israel. In G. Philip and D. Baird (eds), *Ceramics and Change in the Early Bronze Age of Southern Levant*, 315-45. Levantine Archaeology 2. Sheffield: Sheffield Academic Press

Miroschedji, P. de 2000b. La céramique de Khirbet Kerak en Syro-Palestine: état de la question. In C. Marro and H. Hauptmann (eds), *Chronologie des pays du Caucase et de l'Euphrate aux IV^e-III^e millénaires. Actes du Colloque International d'Istanbul, 16-19 décembre 1998*, 255-78. Varia Anatolica XI. Paris: Institut Français d'Etudes Anatoliennes d'Istanbul

Nigro, L. 1994, *Ricerche sull'architettura palaziale della Palestina nelle età del Bronzo e del Ferro*. Contributi e Materiali di Archeologia Orientale XIII. Roma: Università degli Studi di Roma "La Sapienza"

Nigro, L. 2000. Area F. An Early Bronze IIIA Residential Quarter. In N. Marchetti and L. Nigro (eds), *Excavations at Jericho, 1998. Preliminary Report on the Second Season of Excavations and Surveys at Tell es-Sultan, Palestine*, 15-120. Quaderni di Gerico 2. Roma: Università di Roma "La Sapienza"

Nigro, L. 2006a. Results of the Italian-Palestinian Expedition to Tell es-Sultan: at the Dawn of Urbanization in Palestine. In L. Nigro and H. Taha (eds), *Tell es-Sultan/Jericho in the Context of the Jordan Valley: Site Management, Conservation and Sustainable Development. Proceedings of the International Workshop Held in Ariha 7th - 11th February 2005 by the Palestinian Department of Antiquities and Cultural Heritage - Ministry of Tourism and Antiquities, UNESCO Office - Ramallah, Rome "La Sapienza" University*, 1-40. Rome «La Sapienza» Studies on the Archaeology of Palestine and Transjordan, 2. Rome: «La Sapienza» Expedition to Palestine and Jordan

Nigro, L. 2006b. Sulle mura di Gerico. Le fortificazioni di Tell es-Sultan come indicatori della nascita e dello sviluppo della prima città di Gerico nel III millennio a.C. In F. Baffi, R. Dolce, S. Mazzoni and F. Pinnock (eds), *Ina Kibrāt Erbeti. Studi di Archeologia orientale dedicati a Paolo Matthiae*, 349-97. Roma: Università di Roma "La Sapienza"

Nigro, L. (ed.) 2008. *Batrawy II. The EB II city-gate, the EB II-III fortifications, the EB II-III temple. Preliminary report of the second (2006) and third (2007) seasons of excavations*. Rome «La Sapienza» Studies on the Archaeology of Palestine and Transjordan, 2. «La Sapienza» Expedition to Palestine and Jordan, Rome: Università di Roma "La Sapienza"

Petrie, W.M.F. 1891. *Tell el-Hesi (Lachish)*. London: Committee of the Palestine Exploration Fund

Philip, G. and Baird, D. 2000. Early Bronze Age Ceramics in the Southern Levant: an overview. In G. Philip and D. Baird (eds), *Ceramics and Change in the Early Bronze Age of Southern Levant*, 3-29. Levantine Archaeology 2. Sheffield: Sheffield Academic Press

Philip, G. and Baird, D. (eds), 2000. *Ceramics and Change in the Early Bronze Age of Southern Levant*. Levantine Archaeology 2. Sheffield: Sheffield Academic Press

Rast, W.E. and Schaub, R.T. 1989. *Bâb edh-Dhrâ': Excavations in the Cemetery Directed by Paul W. Lapp (1965-67)*. Reports of the Expedition to the Dead Sea Plain, Jordan, Volume I. Winona Lake: Eisenbrauns

- Sala, M. 2008a. *L'architettura sacra della Palestina nell'età del Bronzo Antico I-III*. Contributi e Materiali di Archeologia Orientale XIII. Roma: Università degli Studi di Roma "La Sapienza"
- Sala, M. 2008b. Khirbet Kerak Ware from Tell es-Sultan/ancient Jericho: a Reassessment in the Light of the Finds of the Italian-Palestinian Expedition (1997-2000). In J.M. Córdoba, M. Molist, M.C. Pérez, I. Rubio and S. Martínez (eds), *Proceedings of the 5th International Congress on the Archaeology of the Ancient Near East, Madrid, April 3-8 2006*, vol. III, 111-133. Madrid: Publications Service of the Universidad Autónoma of Madrid
- Sala, M. 2008c. *Il Temple en L a Biblo. Vicino Oriente XIV*, 59-84
- Stager, L.E. 1992. The Periodization of Palestine from Neolithic through Early Bronze Times. In R.W. Ehrich (ed.), *Chronologies in Old World Archaeology* (3rd Edition), vol. I, 22-41. Chicago: University of Chicago Press
- Sukenik, Y. 1947. On the Technique of the Khirbet Kerak Ware. *Bulletin of the American Schools of Oriental Research* 106, 9-17
- Tufnell, O. 1958. *Lachish IV. The Bronze Age*. The Wellcome-Marston Archaeological Research Expedition to the Near East, vol. IV. London: Oxford University Press
- Wright, G.E. 1937. *The Pottery of Palestine from the Earliest Times to the End of the Early Bronze Age*. New Haven: American Schools of Oriental Research
- Yekutieli, Y. and Gophna, R. 1994. Excavations at an Early Bronze Age site near Nizzanim. *Tel Aviv* 21, 162-85
- Zuckerman, S. 2003. The Early Bronze Age I Pottery; Tel Qashish in the Early Bronze Age I; The Early Bronze Age II-III Pottery; Tel Qashish in the Early Bronze Age. In A. Ben-Tor, R. Bonfil and S. Zuckerman (eds), *Tel Qashish, a Village in the Jezreel Valley*, 35-60, 130-60, 178-82. Qedem Report 5. Jerusalem: The Hebrew University of Jerusalem, Institute of Archaeology