# SOME OBSERVATIONS ON THE MANUFACTURING TRADITIONS IN THE WOODEN AND STONE VESSEL INDUSTRY IN HELLENISTIC PALESTINE

It was P. Briant who under the influence of the *Annales* stated « Or, comment apprécier dans toutes ses manifestations, implications et conséquences, la conquête et la prise de pouvoir des Gréco-Macédoniens au Proche et au Moyen-Orient sans connaître de l'intérieur l'Empire achéménide ? Comment traiter sérieusement des continuités et ruptures entre deux phases historiques A et B, si A n'est *a priori* que le faire-valoir de B et si l'on construit tout le raisonnement sur le postulat d'une rupture décisive entre A et B ? Il est bien clair qu'à son tour un tel postulat "justifie" le manque d'intérêt pour A » <sup>1</sup>.

This statement comes to challenge the usually accepted view that Eastern Mediterranean and Middle Eastern societies experienced a « break » in tradition in every aspect of their material and spiritual culture following the Macedonian conquest. In what follows, I intend to take as my example of the origin of influence one esoteric aspect of every-day ware, that is the wooden and stone vessel industry in Hellenistic Palestine, and address the question of their « continuity ».

Wooden vessels from the Hellenistic period in Palestine are usually partly manufactured by hand and partly by lathe <sup>2</sup>. The vessels were normally made from the available Palestinian flora <sup>3</sup>. Examples recovered from sites round the Dead Sea and in the lower Jordan Valley have been preserved because of the local climate and soil conditions. The many examples retrieved from Tombs 1, 5 and 6 at 'En Gedi have been dated according to their contexts to the late 2<sup>nd</sup>

*Topoi* suppl. 8 (2007) p. 173-187

<sup>1.</sup> BRIANT 1982, p. 8.

<sup>2.</sup> I differentiate between vessels and other objects, since « vessels » in the current study are mostly synonymous with table or serving items, and are mainly bowls.

<sup>3.</sup> Werker 1994 ; Liphschitz 1998.

and 1st century BCE<sup>4</sup>. Outside this context there are fewer examples, such as the vessels discovered in the caves of Wâdī ed-Dâliyeh<sup>5</sup>, the Jewish cemetery at Jericho<sup>6</sup>, and a few other sites in the Judean Desert<sup>7</sup>: these have been dated from the late 1<sup>st</sup> century BCE to the early 2<sup>nd</sup> century CE, mostly because of historical circumstances. However, these dates do not reflect the true chronological frame, but rather a period of extensive inhabitation and occupation in their main findspots in the Dead Sea region<sup>8</sup>. Typologically, those vessels dated to the late 2<sup>nd</sup> and 1<sup>st</sup> century BCE are divided between incurved rim bowls with a hemispherical or semi-oval body and a flattened or shallow ring-base; out-curved rim bowls with a conical body and a plain or flattened base; and plain rim deep semi-oval body bowls with a base decorated by concentric circles. Plates with a thickened, plain rim and a shallow ring-base also occur (fig. 1). The other group, which is dated to the late 1st c. BCE to the early 2nd c. CE, is divided between incurved rim bowls with a hemispherical body and a shallow ring-base, that are differentiated from their Hellenistic counterparts by the recess on the outside of the body just below the rim; and everted rim bowls with a conical body and a flattened base (fig. 2). The decoration of the wooden vessels is usually limited to one or more horizontal recesses. The original use of color may well be conjectured, although

- 6. HACHLILI 1999.
- AHARONI 1961, p. 155, Pl. 22, 1-3 and 4, the two items on the left; DE VAUX 1961, p. 41, Pl. 10, 13-15; YADIN 1963, p. 123-135 passim, and esp. Pls. 39-40.
- 8. In excavations and surveys along the western coast of the Dead Sea no Ptolemaic or Seleucid architectural remains have yet been discovered (BAR-ADON 1972; cf. also 'Atiqot 41 (2002), articles under Regions XI, XII, XIII, XIV, XV). The same is clear for the eastern coast of the Dead Sea, according to the finds retrieved from recent excavations (cf. CLAMER 1997) and surveys (cf. 'AMR et al. 1996; and see also MALLON 1924). The finds retrieved from 'En Gedi, such as Tel Goren, Stratum III (cf. MAZAR, DOTHAN, DUNAYEVSKY 1966, p. 39-44; MAZAR, DUNAYEVSKY 1967, p. 142) and the forts of Mispe 'En Gedi and Rosh Ma'ale 'En Gedi (cf. OFER 1987) show no authentic evidence for Ptolemaic or Seleucid presence, and thus we should attribute the 'Hellenistic' finds to the period of Hasmonean rule, including the few Ptolemaic and Seleucid coins which most probably remained in circulation at the time. It is thus logical to date other Hellenistic remains such as tombs (cf. Avigad 1962, p. 181-183, note 25; HADAS 1994), anchoring places (HADAS 1993) and anchors (HADAS 1992) to the period of Hasmonean rule in view of the geo-political and archaeological evidence for this region (cf. FISCHER, GICHON, TAL 2000, p. 139-142). It should be emphasized that the historical sources that mention the Dead Sea in pre-Hasmonean times focus on its natural resources (cf. STERN 1984, III, p. 116-117, s.v. Dead Sea); we are also aware of the appointment of Hieronymus of Cardia as controller of the bitumen extraction industry on behalf of Antigonus Monopthalmus by the end of the fourth century BCE (Diodorus XIX, 100, 1-2).

<sup>4.</sup> Hadas 1994.

<sup>5.</sup> NICKELSBURG 1974, p. 101, Pl. 31, 1-8 passim.

the specimens actually retrieved show no remnants of color. Their average diameter is ca. twelve and a half cm. Morphologically, these wooden vessels show earlier manufacturing traditions. We can trace equivalents in ceramic vessels for the incurved and out-curved rim wooden vessel-types and for the thickened plain rim plates in unbroken tradition from prehistoric times 9. Hellenistic monochrome cast glass vessels may well be paralleled to the same bowl-types <sup>10</sup>, as well as other vessels made of different materials, as will be seen further on. Chronologically, it is only logical to assume that wooden vessels in Hellenistic times were in common use throughout the period. The fact that many of the wooden vessels are made from generally available Palestinian flora, and from woods both common and foreign to the Dead Sea region, suggest that this industry was not restricted to arid zones, and most probably had no defined geographical boundaries. The presence of wooden cosmetic objects (such as kohl tubes and small boxes) and other wooden accessories (such as hairpins and combs) at sites around the Dead Sea <sup>11</sup> shows that the wood carving industry was adaptable, and in many cases the type of wood was compatible to the function of the vessel. Wooden bowls were most probably table or serving vessels, but other functions can also be conjectured. The vessels were most probably used for solid food products as liquids would have been absorbed into their body.

Palestinian stone vessels of the Hellenistic period are also partly manufactured by hand and partly by lathe. The vessels were usually made from generally available local Palestinian rock, such as limestone, diorite or basalt. There are also vessels made from rock foreign to the Palestinian region, such as calcite-alabaster, which were normally imported from Egypt, either as raw material or as semi-worked or fully worked vessels. Unlike the wooden vessels, the stone vessels are found all over Palestine and had no defined geographical boundaries. Vessels may be categorized as either open or closed and are mainly divided between bowls and craters (*fig. 3*); but objects such as cube-shaped incense altars, grinding stones, pestles, weights, spindle whorls, etc. are also found. Locally-manufactured stone bowls are usually shallow-bodied, quarter- to semi-oval in shape. They may be classified as variants of either ledge rim bowls or plain (sometimes incurved) rim bowls with a plain or flattened base. There are specimens with handles and a trumpet or three-legged (tripod) base <sup>12</sup>. The stone vessels are plain and usually have no defined decoration,

- 10. Jackson-Tal 2004.
- 11. Cf. e.g. HADAS 1994 ; 2002.
- 12. Quantities are thus sizeable and reference to prototypes (below) is somewhat selective, and does not always represent secured Hellenistic contexts. For the

For example cf. e.g. AMIRAN 1970, p. 191-212 passim, for the Iron Age ; STERN 1982, p. 94-98 passim, for the Persian period ; and GUZ-ZILBERSTEIN 1995, p. 289-293 and Figs. 6.1-6.4 passim ; ROSENTHAL-HEGINBOTTOM 1995, p. 218-219 and Fig. 5.6, 10-12, for the Hellenistic period.

but as with the wooden vessels, the use of color decoration may be conjectured, although the specimens retrieved show no remnants of color. Their average diameter is ca. twenty-five cm. and thus they are normally double the size of their wooden counterparts. Stone bowls, like many of the stone objects, preserved their traditional forms throughout different prehistoric and historical periods. However, it does seem that the ledge rim bowl-type is the most characteristic for the Persian and Hellenistic periods. The imported calcite-alabaster stone vessels may also be categorized as either open or closed vessels and mainly divided between bowls and alabastra. Bowls can be classified as either ledge rim or plain (sometimes incurved) rim, with a plain or flattened base, and thus are parallel to the locally manufactured examples <sup>13</sup>. The alabastra are bow-drilled vessels with lug-handles sometimes shaped in the form of a duck's head. They are classified as two types, with a mushroom-like rim and an upturned plain one with a ridge on the neck <sup>14</sup>. A

- Vessels does not always represent secured Hellenistic contexts. For the ledge rim bowl type cf. e.g. Samaria (REISNER, FISHER, LYON 1924, p. 334, Fig. 206, 7c); Shechem (KERKHOF 1969, p. 98-99, Fig. 30, 10); Tel Michal (CLAMER 1989, p. 346-348, Fig. 30.1, 7-8); Ashdod (DOTHAN, FREEDMAN 1967, Fig. 9, 3); Jerusalem (REICH 2003, p. 269-270, pl. 8.6, 4); Beersheba (DERFLER 1984, p. 126-127, Pls. 24, 25, 1); Sheikh Zueid (PETRIE 1937a, p. 10, Pl. 26, 12-13, 15). For the plain (thickened and flattened) rim bowl type cf. e.g. Samaria (REISNER, FISHER, LYON 1924, p. 334, Fig. 206, 7d, 7h, 8a); Tel Michal (CLAMER 1989, p. 347, Fig. 30.1, 4-6); Jerusalem (REICH 2003, p. 269-270, pl. 8.6, 3); Lachish (TUFNELL 1953, Pls. 57, 49, 64, 2-3). For the incurved rim bowl type cf. e.g. Dor (?) (GUZ-ZILBERSTEIN 1995, p. 334-335, Fig. 6.63, 11); Tel Michal (CLAMER 1989, p. 348-349, Fig. 30.1, 15-16). It is worth mentioning that there are few specimens with a droopy rim at Samaria cf. e.g. REISNER, FISHER, LYON 1924, p. 334, Fig. 206, 9a.
- Vessels represent secured Persian and Hellenistic contexts. For the mushroom-like rim bottle type with cylindrical or conical neck cf. e.g. PETRIE 1937b, Pl. 37, 948-971 ; STERN 1982, p. 149, note 20 ; and see also Akko (FORTUNA 1966, p. 515-516,

ledge rim bowl type cf. e.g. Tell Keisan (BRIEND 1980, p. 112, Pl. 16, 2); Samaria (REISNER, FISHER, LYON 1924, p. 335-336, Figs. 207, 1a, 209, 6d, 6e, 6g); Tel Michal (SINGER-AVITZ 1989, p. 352-353, Fig. 31.4, 9-12); Tell en-Nasbeh (McCown 1947, p. 249, 286, Fig. 63, 2); Tell el-Fûl (ALBRIGHT 1924, p. 24; SINCLAIR 1960, p. 46, Pl. 26, 10; LAPP 1981, p. 110, Pl. 27, 3); Ashdod (BAHAT 1971, p. 170, Fig. 96, 12); Jerusalem (CAHILL 1992, p. 191-193, Fig. 14, 1-18; REICH 2003, p. 263-265, pl. 8.1, 4-7); Lachish (TUFNELL 1953, Pl. 64, 5). For the plain sometimes incurved rim bowl type cf. e.g. Tell Keisan (BRIEND 1980, p. 112, Pl. 16, 5); Tel Michal (SINGER-AVITZ 1989, p. 351-353, Figs. 31.3, 10-11, 13-14, 31.4, 1-5, 7, 13); Mazor (ZILBERBOD, AMIT 2001, p. 51\*, Fig. 102, 1); Ashdod (DOTHAN, FREEDMAN 1967, 31, Fig. 12, 7; DOTHAN 1971, p. 66, Fig. 28, 1, 3, 5); Jerusalem (REICH 2003, p. 263-265, pl. 8.1, 8-9); Beersheba (DERFLER 1984, p. 148, Fig. 8, 3). For trumpet-based specimens cf. e.g. Samaria (REISNER, FISHER, LYON 1924, p. 336-337, Figs. 209, 6a, 6c, 210, IA1a; KENYON 1957, p. 465-466, Fig. 117, 6); Shechem (KERKHOF 1969, 102, Fig. 32, 10-11). For tripod-based specimens cf. e.g. Dor (GUZ-ZILBERSTEIN 1995, 315-316, 332-333, Figs. 6.42, 11, 6.61, 15); Tel Michal (SINGER-AVITZ 1989, 351-352, Fig. 31.2); Ashdod (DOTHAN 1971, p. 66, Fig. 28, 6-9).

comparison between the locally-manufactured stone vessels and the imported ones shows that, in the main, the open vessels are similar, although the calcite alabaster vessels are of much smaller dimensions, whereas some of the closed vessels such as alabastra are only to be found as imports. Locally-manufactured stone ink wells and closed lamps <sup>15</sup> suggest that the bow-drilling technique was in use in Palestine, and that imported alabastra were preferred (when imported as finished products) for the sake of their material, and not because local artisans were unable to produce similar versions in local stone. We can thus characterize the local industry as preferring to manufacture open, shallow vessels of noticeably small dimensions. not only in the Hellenistic period but also in earlier times. Hellenistic stone vessels, like Hellenistic wooden vessels, have equivalents in ceramic vessels for the ledge rim or plain rim bowls consistently from prehistoric times. They too may well be paralleled to some of the Hellenistic cast glass vessels (fig. 4), as well as to other vessels made of different materials such as metal, bone and faïence, though these last are rarely found in Hellenistic Palestine<sup>16</sup>. Their more defined characteristics - hardness and heaviness - suggest that they functioned differently, most probably in the preparation process of various products, as grinding, mixing, or kneading instruments and even for placing or serving finished products. The alabastra, like the stone bowls, were produced in other materials during the Hellenistic period. These include glass of the Mediterranean Core-Formed groups, as well as

T.A. 61.77, Fig. 43); Tel Michal (CLAMER 1989, p. 348, Fig. 30.1, 11-13). For the ridged neck upturned rim bottle type cf. e.g. Berit Ahim near Akko (EDELSTEIN 2002, p. 78\*, fig. 36, 2); Tel Michal (CLAMER 1989, p. 348, Fig. 30.1, 14); 'En Gedi (HADAS 1994, p. 56, Fig. 15, 25). See also Jerusalem (REICH 2003, p. 269-270, Pl. 8.6, 1) for a body fragment.

<sup>15.</sup> CAHILL 1992, p. 194-195, Fig. 14, 24-25.

<sup>16.</sup> For metal bowls and pots cf. e.g. MACALISTER 1911-12, p. 340-341, Pl. 95, 6, 16, 18-19; ZILBERBOD, AMIT 2001, p. 51\*, Fig. 103, 3. For faïence bowls cf. e.g. NENNA, SEIF EL-DIN 2000, p. 34-37, 432; who omitted MACALISTER 1911-12, p. 337, Pl. 211, 17-18, 20-22; DOTHAN, FREEDMAN 1967, p. 26, Fig. 9, 1. In this context, brief correlation to other vessel-manufacturing industries in Hellenistic Palestine, such as metal and bone, must be addressed. Metal objects may be categorized as table or serving vessels, working tools, hunting tools, weaponry, personal accessories and fitting implements. Serving vessels found in Hellenistic Palestine are few and consist of bowls, pots, jugs and ladles that in general are well-paralleled to Persian period and earlier material. As such, both bowls and ladles are normally hemispherical in shape, with a plain incurved rim and sometimes an ornamented outer surface. Bone objects show continuous manufacturing traditions, so that those of Hellenistic date could easily have been dated typologically to almost any earlier period. Those retrieved from Hellenistic strata in Palestinian sites may be categorized as working tools, weaponry, musical instruments, personal accessories and games. Table or serving vessels are hardly ever found in secured Hellenistic contexts, but those of later dates are mostly hemispherical in shape. Objects made of ivory are even fewer and mostly restricted to objects used for ornamental purposes.

metal, bone, faïence and most probably wood. Alabastra were used as containers, normally of a unified standard, for products that needed to be sealed before use. Stone vessel-types of the Hellenistic period, or more correctly, stone vessel-types from Ptolemaic and Seleucid Palestine, may be regarded as forerunners of the more elaborated stone vessel industry of the Late Second Temple period in Judea and elsewhere in Palestine <sup>17</sup>.

Manufacturing traditions for wooden and stone vessels, as well as glass, metal and bone vessels seem in the main traditional rather than innovative (fig. 5). We can trace their origin to shapes from the prehistoric and proto-historic Levant <sup>18</sup>, and show that they were in use throughout the Bronze and Iron Ages <sup>19</sup>. In terms of the longue durée, we can assert that the more common shapes were in continuous use. We are aware, of course, that there were some inventive trends in the ceramic vessels of the Hellenistic period ; not only because of the use of moulds but also because of necessity and fashion. Moulds used in the ceramic industry are fully integrated for industrial use by the late third and early second centuries BCE, and by the same period moulds were probably used in the glass industry to produce cast bowls. Moulds are synonymous with economical revolutionizing methods : in other words, they reduced costs and enabled the production of different shapes that are more elaborated than the traditional ones, mostly in ceramic vessels. However, in the present case we see a different scenario. Table vessels which are most frequently used in daily living whether made by moulds or any other manufacturing technique are traditionally shaped in wood, stone, and glass vessels. The characteristics of each material is well directed to the primary function of the vessel : wood as an absorbent material is used for solid food products; stone as hard ware is used for the preparation process of various products; and glass as non-absorbent material is used for liquids. Metal vessels may well have had the same primary function as glass because of their non-absorbing characteristics; bone vessels may be defined as esoteric containers that were mostly used for cultic purposes. Ceramic vessels were more flexible in usage and adaptable in function. The quality of their ware, i.e. coarse, semi-fine, fine etc., and the treatment of

<sup>17.</sup> MAGEN 2002 ; GIBSON 2003.

Such as stone vessels from Pre-Pottery Neolithic, Neolithic, Chalcolithic, and Early Bronze Age periods cf. e.g. AMIRAN 1978, 57-58, Pls. 77, 1-4 and 78, with few exceptions; DORRELL 1983; WRIGHT 1992; GOPHER, ORRELLE 1995.

<sup>19.</sup> It should be sufficient to relate here to a representative selection of the many publications on stone vessels from the Late Bronze Age in this region cf. e.g. YADIN *et al.* 1960, Pls. 127, 15-19, 149, 1-8; 1961, Pls. 270, 7-8, 290, 13-14; for the Iron Age cf. e.g. LAMON, SHIPTON 1939, Pls. 112-113, with few exceptions; YADIN *et al.* 1960, Pls. 77, 78, 1-3, 7-8; BEN-TOR 1987, p. 236-238, Fig. 58, 1-8; and for the Persian period cf. e.g. SINGER-AVITZ 1989, *passim.* 

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their surface, i.e. slipped, painted or glazed was very much linked to their primary function.

In sum, the heading of this conference « productions et échanges dans la Syrie grecque et romaine » should in this case be ended with a question mark. As we have seen in this article, it is continuity rather than a break or a significant change that we are witnessing. The plasticity and availability of wood and stone as raw materials suggest that the bowl-types derived from prehistoric prototypes, which were subsequently copied in different materials throughout different protohistorical and historical periods until pre-modern times <sup>20</sup>. Moreover, moulds used in the ceramic, glass and metal industry were commonly made either from wood or stone, thus providing a negative image of the vessel-types to be produced. Although one can always claim that the simplicity of the shapes of the bowl-types under discussion meant that they were commonly produced in every period, it is still clear that these types were in continuous use in the southern Levant throughout all periods, and thus traditionalism may well be our best explanation.

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#### **Bibliography**

Aharoni 1961

Y. AHARONI, « The Caves of Nahal Hever », 'Atiqot 3, p. 148-162.

Aharoni 1962

Y. AHARONI, « Expedition B – The Cave of Horror », *Israel Exploration Journal* 12, p. 186-199.

Albright 1924

W.F. ALBRIGHT, « Excavations and Results at Tell el-Fûl (Gibeah of Saul) », AASOR 4, New Haven.

Amiran 1970

R. AMIRAN, Ancient Pottery of the Holy Land : From its Beginning in the Neolithic Period to the End of the Iron Age, Jerusalem.

Amiran 1978

R. AMIRAN, Early Arad : The Chalcolitic Settlement and Early Bronze City, I. First-Fifth Seasons of Excavations, 1962-1966, Jerusalem.

'Amr, Hamdan, Helms, Mohamadieh 1996

K. 'AMR, K. HAMDAN, S. HELMS, L. MOHAMADIEH, «Archaeological Survey of the East Coast of the Dead Sea Phase 1 : Suwayma, az-Zāra and Umm Sidra », *Annual of the Department of Antiquities of Jordan* 40, p. 429-449.

<sup>20.</sup> DALMAN 1933, p. 212-215 ; AVITSUR 1976, p. 71-73.

#### AVIGAD 1962

N. AVIGAD, « Expedition A – Naḥal David », *Israel Exploration Journal* 12, p. 169-183.

## AVITSUR 1978

S. AVITSUR, Man and his Work : Historical Atlas of Tools and Workshops in the Holy Land, Jerusalem. [Hebrew].

#### BAHAT 1971

D. BAHAT, «Area K », in M. DOTHAN et al., Ashdod II-III: The Second and Third Seasons of Excavations 1963, 1965. Soundings in 1967 ('Atiqot 9-10) (English Series), Jerusalem, p. 168-180.

## BAR-ADON 1972

P. BAR-ADON, « The Judean Desert and Plain of Jericho », *in* M. KOCHAVI (ed.), *Judea*, *Samaria and the Golan : Archaeological Survey 1967-1968*, Jerusalem, p. 91-149 [Hebrew].

## BEN-TOR 1987

A. BEN-TOR, « The Small Finds », in A. BEN-TOR, Y. PORTUGALI, *Tell Qiri : A Village in the Jezreel Valley. Report on the Archaeological Excavations 1975-1977* (Qedem 24), Jerusalem, p. 236-243.

## BRIANT 1982

P. BRIANT, Rois, tributs et paysans : études sur les formations tributaires du Moyen-Orient ancien (Centre de Recherches d'Histoire Ancienne 43), Paris.

## BRIEND 1980

J. BRIEND, « Vestiges hellénistiques », *in* J. BRIEND, J.-B. HUMBERT (dirs.), *Tell Keisan* (1971-1976). Une cité phénicienne en Galilée (Orbis Biblicus et Orientalis, Series Archaeologica 1), Paris, p. 101-116.

#### CAHILL 1992

J.M. CAHILL, « Chalk Vessel Assemblages of the Persian/Hellenistic and Early Roman Periods », *in* A. DE GROOT, D.T. ARIEL (eds), *Excavations at the City of David 1978-1985 Directed by Yigal Shiloh*, Volume III: *Stratigraphical, Environmental, and Other Reports* (Qedem 33), Jerusalem, p. 190-274.

#### CLAMER 1989

C. CLAMER, « Calcite-Alabaster Vessels », *in* Z. HERZOG, G. Jr RAPP, O. NEGBI (eds), *Excavations at Tel Michal, Israel* (Tel Aviv University, Publications of the Institute of Archaeology 8), Tel Aviv, p. 345-349.

## CLAMER 1997

C. CLAMER, *Fouilles archéologiques de 'Aïn ez-Zâra/Callirrhoé villégiature hérodienne* (Institut Français d'Archéologie du Proche-Orient : Beyrouth–Damas–Amman, Bibliothèque Archéologique et Historique 147), Beirut.

## Dalman 1933

G. DALMAN, Arbeit und Sitte in Palästina III : von der Ernte zum Mehl, Gütersloh (reprinted 1964, Hildesheim).

## **DE VAUX 1961**

R. DE VAUX, « I. Archéologie », *in* P. BENOIT, J.T. MILIK, R. DE VAUX, *Les grottes de Murabba* '*ât* (Discoveries in the Judaean Desert 2), Oxford, p. 3-63.

#### Derfler 1984

S.L. DERFLER, *The Hellenistic Temple at Beersheva, Israel* (Ph.D. Thesis, UMI), Ann Arbor.

## Dorrell 1983

P.G. DORRELL, « Appendix A : Stone Vessels, Tools, and Objects », *in* K.M. KENYON, T.A. HOLLAND, *Excavations at Jericho*, Volume Five : *The Pottery Phases of the Tell and Other Finds*, Jerusalem, p. 485-575.

## DOTHAN 1971

M. DOTHAN, « Area A; The Hellenistic Strata; Small Finds », in M. DOTHAN et al., Ashdod II-III: The Second and Third Seasons of Excavations 1963, 1965. Soundings in 1967 ('Atiqot 9-10) (English Series), Jerusalem, p. 64-73.

#### DOTHAN, FREEDMAN 1967

M. DOTHAN, D.N. FREEDMAN, Ashdod I: The First Season of Excavations 1962 ('Atiqot 7) (English Series), Jerusalem.

#### Edelstein 2002

G. EDELSTEIN, « A Section of the Hellenistic-Roman Cemetery at Berit Ahim, North of 'Akko (Acre) », '*Atiqot* 43, p. 75\*-98\*. [Hebrew ; English Abstract, p. 257-258].

#### FISCHER, GICHON, TAL 2000

M. FISCHER, M. GICHON, O. TAL, 'En Boqeq. Excavations in an Oasis on the Dead Sea, Volume II: The Officina-An Early Roman Building on the Dead Sea Shore, Mainz.

## Fortuna 1966

M.T. FORTUNA, *Campagne di scavo ad Akko, 1961-1962* (Memorie dell'Istituto Lombardo-Accademia di Scienze e Lettere 29/4), Milan.

#### GIBSON 2003

S. GIBSON, « Stone Vessels of Early Roman Period from Jerusalem and Palestine. A Reassessment », *in* G.C. BOTTINI, L. DI SEGNI, L.D. CHRUPCAŁA (eds), *One Land – Many Cultures : Archaeological Studies in Honour of Stanislao Loffreda OFM* (Studium Biblicum Franciscanum, Collectio Maior 41), Jerusalem, p. 287-308.

#### GOPHER, ORRELLE 1995

A. GOPHER, E. ORELLE, *The Ground Stone Assemblages of Munhata, a Neolithic Site in the Jordan Valley - Israel : A Report, Jerusalem.* 

#### GUZ-ZILBERSTEIN 1995

B. GUZ-ZILBERSTEIN, « The Typology of the Hellenistic Coarse Ware and Selected Loci of the Hellenistic and Roman Periods », *in* E. STERN (dir.), *Excavations at Dor, Final Report Volume I B, Areas A and C : The Finds* (Qedem Reports 2), Jerusalem, p. 289-433.

#### HACHLILI 1999

R. HACHLILI, «Miscellaneous Objects: Wooden Objects», in R. HACHLILI, A.E. KILLEBREW, Jericho: The Jewish Cemetery of the Second Temple Period (IAA Reports 7), Jerusalem, p. 138.

#### HADAS 1992

G. HADAS, « Stone Anchors from the Dead Sea », 'Atiqot 21, p. 55-57.

#### HADAS 1993

G. HADAS, « Where was the Harbour of 'En-Gedi situated ? », *Israel Exploration Journal* 43, p. 45-49.

#### Hadas 1994

G. HADAS, *Nine Tombs of the Second Temple Period at 'En Gedi* ('Atiqot 24), Jerusalem [Hebrew ; English Abstract, p. 1\*-8\*].

#### Hadas 2002

G. HADAS, « Wood Industry in the Second Temple Period as reflected in 'En Gedi Finds », *Michmanim* 16, p. 23-35 [Hebrew ; English Abstract, p. 40\*-41\*].

#### JACKSON-TAL 2004

R.E. JACKSON-TAL, «The Late Hellenistic Glass Industry in Syro-Palestine : A Reappraisal », *Journal of Glass Studies* 46, p. 11-32.

#### Kenyon 1957

K.M. KENYON, « Miscellaneous Objects in Metal, Bone and Stone », *in* J.W. CROWFOOT, G.M. CROWFOOT, K.M. KENYON, *The Objects from Samaria*, London, p. 439-468.

## Kerkhof 1969

V.I. KERKHOF, « Catalogue of the Shechem Collection in the Rijksmuseum Van Oudheden in Leiden », *in* A. KLASENS (ed.), *Oudheid Kundige Mede Delingen*, Leiden, p. 28-109.

## LAMON, SHIPTON 1939

R.S. LAMON, G.M. SHIPTON, *Megiddo I*: Season of 1925-1934, Strata I-V (Oriental Institute Publications 42), Chicago.

## Lapp 1981

N.L. LAPP, « Other Finds from the 1964 Campaign », *in* N.L. LAPP (ed.), *The Third Campaign at Tell el-Fûl : The Excavations of 1964* (AASOR 45), Cambridge, Mass, p. 109-115.

## LIPHSCHITZ 1998

N. LIPHSCHITZ, « Timber Analysis of Household Objects in Israel : A Comparative Study », *Israel Exploration Journal* 48, p. 77-90.

#### MACALISTER 1911-12

R.A.S. MACALISTER, The Excavation of Gezer I-III, 1902-1905 and 1907-1909, London.

## MAGEN 2002

I. MAGEN, The Stone Vessel Industry in the Second Temple Period (JSP 1), Jerusalem.

#### MALLON 1924

A. MALLON, « Voyage d'exploration au sud-est de la Mer Morte », *Biblica* 5, p. 413-455.

## MAZAR, DOTHAN, DUNAYEVSKY, 1966

B. MAZAR, T. DOTHAN, I. DUNAYESVSKY, *En-Gedi* : *The First and Second Seasons of Excavations 1961-1962* ('Atiqot 5), Jerusalem.

## MAZAR, DUNAYEVSKY 1967

B. MAZAR, I. DUNAYEVSKY, « En-Gedi : The Fourth and Fifth Seasons of Excavations, Preliminary Report », *Israel Exploration Journal* 17, p. 133-143.

#### McCown 1947

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

NENNA, SEIF EL-DIN 2000

M.-D. NENNA, M. SEIF EL-DIN, La vaisselle en faïence d'époque gréco-romaine, Catalogue du Musée gréco-romain d'Alexandrie (Institut Français d'Archéologie Orientale-Études alexandrines 4), Cairo.

#### NICKELSBURG 1974

G.W.E. Jr. NICKELSBURH, « Miscellaneous Small Finds », *in* P.W. LAPP, N.L. LAPP, (eds), *Discoveries in the Wâdī ed-Dâliyeh* (AASOR 41), Cambridge, Mass., p. 101-102.

## Ofer 1987

A. OFER, « 'En Gedi », Excavations and Surveys in Israel 5, p. 27-28.

#### Petrie 1937a

W.M.F. PETRIE, Anthedon, London.

#### Petrie 1937b

W.M.F. PETRIE, *The Funeral Furniture of Egypt and Stone and Metal Vases* (British School of Archaeology in Egypt Publications 59), London.

## **REICH 2003**

R. REICH, « Stone Vessels, Weights and Architectural Fragments », *in* H. GEVA (ed.), *Jewish Quarter Excavations in the Old City of Jerusalem Conducted by Nahman Avigad, 1969-1982.* Volume II – *The Finds from Areas A, W and X-2 – Final Report*, Jerusalem, p. 263-291.

#### REISNER, FISHER, LYON 1924.

G.A. REISNER, C.S. FISHER, D.G. LYON, *Harvard Excavations at Samaria 1908-1910*, I-II, Cambridge, Mass.

**ROSENTAHL-HEGINBOTTOM** 1995

R. ROSENTAHL-HEGINBOTTOM, «Imported Hellenistic and Roman Pottery», *in* E. STERN (dir.), *Excavations at Dor, Final Report Volume I B, Areas A and C : The Finds* (Qedem Reports 2), Jerusalem, p. 183-288.

#### Sinclair 1960

L.A. SINCLAIR, *An Archaeological Study of Gibeah (Tell el-Fûl)*, Part 1 (AASOR 34-35), New Haven, p. 1-52.

#### SINGER-AVITZ 1989

L. SINGER-AVITZ, « Stone and Clay Objects », *in* Z. HERZOG, G. Jr RAPP, O. NEGBI (eds), *Excavations at Tel Michal, Israel.* (Tel Aviv University, Publications of the Institute of Archaeology 8), Tel Aviv, p. 350-360.

## **S**tern 1982

E. STERN, *Material Culture of the Land of the Bible in the Persian Period 538-332 B.C.*, Warminster and Jerusalem.

#### Stern 1974-84

M. STERN, Greek and Latin Authors on Jews and Judaism, I-III, Jerusalem.

#### TUFNELL 1953

O. TUFNELL, Lachish III : The Iron Age, London.

### WERKER 1994

E. WERKER, « Botanical Identification of Wood Remains from the 'En Gedi Excavations », *in* G. HADAS, *Nine Tombs of the Second Temple Period at 'En Gedi* ('Atiqot 24), Jerusalem, p. 69-72 [Hebrew ; English Abstract p. 10\*].

## WRIGHT 1992

K. WRIGHT, « A Classification System for Ground Stone Tools from the Prehistoric Levant », *Paléorient* 18/2, p. 53-81.

## YADIN 1963

Y. YADIN, The Finds from the Bar Kokhba Period in the Cave of Letters, Jerusalem.

## YADIN et al. 1960

Y. YADIN, Y. AHARONI, R. AMIRAN, T. DOTHAN, I. DUNAYEVSKY, J. PERROT, *Hazor II : An Account of the Second Season of Excavations, 1956*, Jerusalem.

## YADIN et al. 1961

Y. YADIN, Y. AHARONI, R. AMIRAN, T. DOTHAN, I. DUNAYEVSKY, J. PERROT, *Hazor III-IV : An Account of the Third and Fourth Seasons of Excavations*, 1957-1958, Plates, Jerusalem.

## ZILBERBOD, AMIT 2001

I. ZILBERBOD, D. AMIT, « Mazor (El'ad), Area P4 », *Hadashot Arkheologiyot – Excavations and Surveys in Israel* 113, p. 50\*-51\*.

SOME OBSERVATIONS ON THE MANUFACTURING TRADITIONS

# WOODEN BOWLS

#### INCURVED RIM





FLATTENED BASE







SHALLOW RING-BASE

## OUT-CURVED RIM



PLAIN BASE



FLATTENED BASE

PLAIN RIM - DEEP SEMI-OVAL BODY

# WOODEN PLATES

## THICKENED-PLAIN RIM





1

















10 cm

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STONE VESSELS FROM THE PREHISTORIC LEVANT



Fig. 5 – Stone vessels from the prehistoric Levant (modified after WRIGHT 1992, Fig. 11)