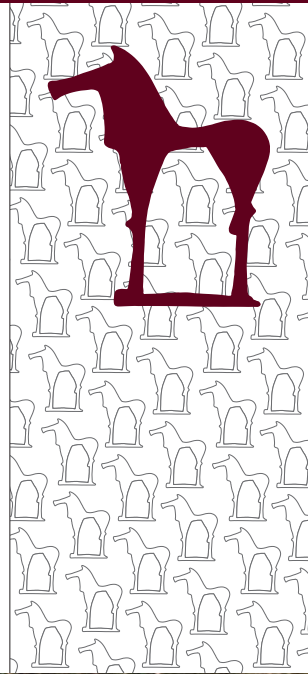


B A B E S C H

Eighth BABESCH Byvanck Lecture

Lawrence Stager

Rites of Spring in the Carthaginian Tophet



Tuesday 25 November 2014
at the National Museum of Antiquities at Leiden

The BABESCH Foundation



Rites of Spring in the Carthaginian Tophet

Eighth BABESCH Byvanck Lecture

Dedicated to Professor Paul Mosca, long-time friend and staff epigraphist from the University of British Columbia, whose 1975 doctoral dissertation (see Bibliography) laid the intellectual ground work for our excavations in the Tophet the following year.

Rites of Spring in the Carthaginian Tophet

Lawrence Stager



The BABESCH Foundation

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Colophon

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Lectori Salutem!

The booklet in your hands is the first printed issue of the annual Byvanck Lecture. This new initiative of the BABESCH Foundation is intended to grow into a series in the coming years with each new Byvanck Lecture.

The peer-reviewed periodical *BABESCH – Annual Papers on Mediterranean Archaeology* (formerly *Bulletin Antieke Beschaving*) was founded in 1926 by prof. dr. C.W. Lunsingh Scheurleer (1881-1941). The journal publishes scholarly articles, short notes of wider archaeological significance and academic book reviews. Scholars from all over the world contribute to the journal, which has individual and institutional subscribers in over 30 countries. Since 1975, the BABESCH Supplements are also published, a series of specialist monographs, congress proceedings and edited volumes in the same sphere of interest. Both are being published by Peeters International Academic Publishers Leuven. The BABESCH Journal and the BABESCH Supplements are both administered by the BABESCH Foundation.

The rise of BABESCH to an established forum for international scholarly exchange has been due in no small part to the tireless efforts of the late Lili Byvanck-Quarles van Ufford (1907-2002). So deep was her dedication that BABESCH was explicitly mentioned in her will as one of the beneficiaries of the sizeable endowment she generously made to Leiden University, with the aim of promoting and furthering the study of the Ancient World. The Byvanck Fund, as it is now called, has enabled the BABESCH Foundation to develop various new activities. One of these is the Byvanck Lecture series, which is dedicated to the dissemination of specialist archaeological research to a wide audience. The Lecture has been organized since 2007 in close cooperation with the Dutch National Museum of Antiquities. The coincidence of this year's lecture on Carthage with the opening of an exhibition on the same ancient city is a good example of the synergy generated by the cooperation. This year, at the 8th edition of the Byvanck Lecture, we proudly present this booklet as a new offshoot from the branching tree that Lili Byvanck planted, as a tangible reminder of the inspiring lecture held by prof. dr. Lawrence Stager.

Enjoy reading!

On behalf of the Board of the BABESCH Foundation,

Demetrius Waarsenburg, President

Rites of Spring in the Carthaginian Tophet

Introduction

In 1976 we began excavations in the *Tophet* of Carthage, also known as the Precinct of Tanit. Intermittent excavations had gone on there since 1921. In 1925 a joint Franco-American expedition under the direction of Francis Kelsey of the University of Michigan continued work begun in the previous year by the Count de Prorok. Kelsey's death in 1927 brought that dig to a halt, but not before they had uncovered hundreds of monuments (*figs. 4-5*) and cinerary urns. The problem of the *Tophet* excavations had not been lack of digging but of careful stratigraphic excavation, recording, and publishing the whole ensemble or assemblage: the stone monuments in relation to urn burials and their contents, especially the cremated osteological remains of what proved to be those of very young humans, lambs (or kids), and birds.

At that time, Edward Said (Professor of English and Comparative Literature at Columbia University) published *Orientalism* (1978), a landmark in postcolonial studies, and either directly or indirectly, had a profound influence on many scholars in the Western world, including ancient historians and revisionist views of the Phoenicians and disparaging claims about them concerning *tophet* precincts and child sacrifice (*fig. 1*; for the history of scholarship, see Garnand 2006).

To be defined and described as the 'Other' by outsiders, as 'Canaanites' by biblical sources and later as 'Phoenicians' by classical authors can lead to gross exaggeration and distortion, and, of course, should be looked at critically but not dismissed out of hand (see Xella *et al.* 2013; Mosca 2013). At the same time, one should keep in mind that 'insiders', such as the Deuteronomistic historian, and prophets, such as Jeremiah, but not late 8th-century ones, such as Isaiah (Isa. 30) and Micah, condemned their own rulers for burning 'sons and daughters' at the 'high place' (Hebrew *bāmôt*) of *Tophet* in the Valley of Ben-Hinnom, at the south end of Jerusalem.

One of the first to question the received opinion about Phoenician child sacrifice was Claude Schaeffer, who argued that the Phoenicians sacrificed their children only 'sporadically', in a form of 'non-institutionalized worship' (Schaeffer 1956; see also Stager 1980; 1982). According to revisionists, the *Tophet* of Carthage,

with its *cippi* and *stelae* burial markers, was a cemetery for infants who died of natural causes. But then how to explain the many other remains of other animals, cremated and buried in urns in this precinct? In the last several decades many other scholars have sided with Schaeffer, discounting primary texts such as the Punic/Phoenician inscribed votive monuments, erected above the cinerary urns with burnt human and animal remains in them. These revisionists include Sabatino Moscati (1987) and his associates (Ribichini 1987; Simonetti 1983) as well as Bénichou-Safar (1981; 2004).

Now, in addition to the traditional literary secondary sources (classical and biblical) and primary records appearing on the monuments above the urns (inscriptional and iconographic), there is the independent osteological data found in the urns, which I would consider dispositive. But these are not easy to interpret. The analysis of the cremated remains demands not only the assessment of a competent physical anthropologist, such as my long-time friend and colleague in the field at Tell el-Hesi, Carthage, and Cyprus, Professor Jeffrey Schwartz (Schwartz *et al.* 2010; 2012), now of the University of Pittsburgh (and his onetime research assistant Fred Houghton, see Schwartz 1993), but also that of a world-class forensic anthropologist, in our case, Professor Patricia Smith, of the Hebrew University of Jerusalem (Smith *et al.* 2011; 2013), who, with her assistant, Gil Avishai, provided another and superior analysis of the cremated infant remains of humans, lambs, and birds in the 444 *tophet* urns from our excavations in Carthage. In this paper I focus mainly on the new evidence from osteology that provides an independent witness to other primary and secondary sources.

History of Research

The Carthage *Tophet* was discovered in December 1921 when Paul Gielly, a public official with an interest in antiquities, noticed a local trafficker in antiquities down on his hands and knees, removing stelae by moonlight (cf. *fig.* 29). Gielly reported to François Icard, the chief of police in Tunis. Together Icard and Gielly bought this plot of land measuring ca. 1,060 square meters and began excavating the site almost immediately with funds and archaeological expertise provided by Louis Poinssot, director of the Service de Antiquites, and by Raymond Lantier, an inspector with the Service (Poinssot/Lantier 1923). This property lay only 50 m. west of what we know as the Commercial Harbor (*figs.* 2-3). By early 1922, Poinssot and Lantier had usurped control over these excavations, although Icard

and Gielly were allowed to take care of day-to-day operations. The flamboyant Count de Prorok, a Polish-American, born in Philadelphia as Francis Byron Khun, was also allowed to assist. He later bought the property from Gielly and Icard. In 1924 De Prorok teamed up with Abbé Chabot, a distinguished epigraphist of Semitic languages from Paris, for another round of digging (Khun de Prorok 1925; 1926; 1928). Count de Prorok, raconteur and dilettante archaeologist whose imagination far outweighed his skills, recounted his experiences at the excavation in the *Smithsonian Annual* (Khun de Prorok 1925, 571):

‘This is a dreadful period of human degeneracy that we are now unearthing in the famous Temple of Tanit [that is, the open-air precinct; LS], but such is archaeology! In one spot we may be uncovering works of priceless art and traces of the advancement of civilization, and in another spot, the contrasting decadence shown in the revelation of such a cult as found at Aphrodisium and at Carthage in Africa.’

In 1925, at the behest of Count de Prorok, a joint Franco-American expedition directed by Francis W. Kelsey, a classical archaeologist of the University of Michigan, continued the work (*fig. 4*). Kelsey had planned to devote many years to digging and publishing the *Tophet*, but the excavations, postponed in 1926, were never continued after Kelsey’s death in 1927. Seven years later, Louis Carton purchased the property adjacent to where Kelsey had dug, but he died before he could begin excavating. At the urging of Carton’s widow, G.G. Lapeyre of the White Fathers Missions dug there in 1934-1936 (cf. Docter 2013). In the mid-1940’s, Pierre Cintas, the modern doyen of Punic archaeology, directed another round of excavations (Cintas 1970; 1976).

Already by 1925 the *New York Times* was worried about the urban expansion into the suburb of Tunis, endangering the vast and immensely important city of ancient Carthage (see also Kelsey 1926, 22-26). Not much was done about it in a concerted effort until 1972. In that year, under the auspices of UNESCO, the Tunisian National Institute of Art and Archaeology (INAA) launched its international campaign to save, preserve, and protect the great heritage that this ancient city represented, a heritage that the world needed to save from the predations of urban sprawl before it was too late.

So an appeal and invitations were sent out to many foreign countries to join in the effort. And a positive response was immediate. The director of the INAA sent out a call for the American Schools of Oriental Research (ASOR) to send some

archaeological teams from the United States. They fielded two teams, one under my direction for the Punic Project sponsored by the Oriental Institute at the University of Chicago and the Harvard Semitic Museum; the other under the direction of John Humphrey for the Roman Period, sponsored by the University of Michigan's Kelsey Museum.

When we arrived to dig in 1975, there was already a myriad of teams from other countries in the field, each applying a variety of archaeological and surveying methods in different periods and parts of this vast site. They included, of course, teams from Tunisia itself and a dozen or more teams from Europe and North America: Britain, Canada, France, Germany, Italy, Netherlands, Sweden, Denmark, Bulgaria, Poland and our two American teams. It was an experience that I have never had anywhere else during my 50 years of archaeological field work. And what a delightful experience it was and an unrivaled smorgasbord of diverse ways of doing archaeology.

During our six seasons in Carthage at the Commercial Harbor and five in the *Tophet*, we had great rapport with and support from the staff of the Institute at every level. For those years we owe a debt of gratitude to them all, first and foremost to Dr. Azzedine Beschouch, Director of the Tunisian INAA in those days, and to Dr. Abdelmajid Ennabli, Curator of the Site of Carthage and coordinator of the whole International Preservation Campaign (*Campagne Internationale de Sauvegarde de Carthage*).

Stratigraphy and Chronology

Donald Harden, then an Instructor at the University of Aberdeen, had joined Kelsey's excavations, and was enlisted by the director to work on the pottery and the glass. Harden published a masterpiece, dealing with the pottery and chronology from the Kelsey excavations. In this pioneering study (Harden 1934; see also Harden 1927), he used his own typological sequences of the urns as well as the rather gross 'stratigraphy' (actually 'periods') of these excavations. When he visited our dig in 1978, at age 78, he could recall, as though it were yesterday, many details of the Kelsey excavations and of the monuments still standing.

Harden periodized the life of the 'Precinct of Tanit', from Tanit I (ca. 800-600 BC), to Tanit II (ca. 600-ca. 300 BC), and ending in Tanit III (ca. 300-146 BC).

Our excavations were able to detail and refine the stratigraphy into 8 phases (I.1-3; II.4-6; III.7-8) (see *figs. 8-15*; Stager/Greene/Garnand forthcoming; Stager *et al.* in preparation). We never had more than six senior experienced staff archaeologists and their assistants in the *Tophet* excavating the 5 x 5 meter squares; no untrained personnel were allowed to excavate. Of course this slowed down the amount that could be excavated. During seven months of field work and the removal of thirty cubic meters of soil, we discovered over 200 cinerary urns. The teams' recognition of the various outdoor surfaces from which the urn pits were dug (and their meticulous recording of the details) provided the essential stratigraphic information for unraveling the incredibly complicated sequence of burial phases in the *Tophet*. In Kelsey's day many digging methods and retrieval techniques had either not been developed or discovered. His distinguished staff had much expertise but mainly in history and epigraphy. His scores of workers, with few experienced supervisors, dug at a very rapid pace: in 1925 they extricated 1,000 urns and exposed hundreds of monuments over a three month dig season! There was no way that this uncontrolled operation could dig and record in a detailed systematic way.

In the field Kelsey recognized three levels that could be discerned, which in Harden's publications became Tanit I, II, and III. Kelsey described the earliest Punic level (Tanit I) this way: 'The lowest urns were found in the shallow depressions of the bedrock, or just above the rock (...) and about each urn a small cairn of rough stones was carefully piled' (Kelsey 1926, 43; *figs. 6-8, 21-22*).

Some of the urns and so-called cairns from this level were in a layer of black earth ca. a half meter in thickness. The cairns served the same purpose as later monuments, namely, to mark the urn burial. Over this black earth was a layer of yellow clay above which the second level (Tanit II) commences, which averages in depth from one and a half to two meters. Kelsey reports that 'In the second level no cairns were found (...)' (Kelsey 1926, 45). But rather 'dedicatory stones', that is, *stelae* and *cippi* were set over the urns to mark the burial. The density of urns was four times greater in the second level than in the first. In the upper, or third level (Tanit III) a thick earthen fill covered the monuments and then 'urns were buried in the earth among the tops of the dedicatory stones' (Kelsey 1926, 45).

Our expedition looked for these stratigraphic clues, the black earth over the bedrock and the yellow clay layer. We found the former, but not the latter, in our east-west trench of about 150 square meters, running almost parallel to the Roman foundation vault (*fig. 30*), and adjacent to, sometimes between and even

beneath many of the monuments that Kelsey's Franco-American Expedition had exposed (*fig. 5*).

The importance of understanding that all *tophet* urns were buried in pits cannot be over emphasized. And that recognizing the surface on which those ancient diggers stood to dig the pits is essential for establishing precise stratigraphy.

The earliest urns we have found (I.1-3) were all placed in pits dug either into the sandstone bedrock or a matrix of black clay. The pits were lined with cobbles, the cinerary urn interred and capped with stones. The black clay deposit on bedrock that Kelsey recognized is natural – created when a large swamp or marsh dried up – and precedes the use of the *Tophet*. If the prehistoric marsh sediments were mistakenly excavated first, leaving the stone lining of the burial pit exposed and freestanding, this might give the appearance of a cairn (*figs. 6-8*). Whenever one sees a photograph of Phoenician *tophet* urns, supposedly in situ but standing full-bodied or even partially exposed, one can be certain that the excavator missed the top of the interment pit and excavated the unit in reverse. Since this still happens today on some excavations, we shouldn't judge Kelsey too harshly for what he did almost a century ago. And even using the rather crude digging methods he could retrieve some good results. For example, he calculated that the middle level (Tanit II) had 'more than four times as many urns in this level as underneath' (Tanit I) (Kelsey 1926, 45). We calculated the number of urns for Tanit I.1-3 at 72 (*fig. 26*), and that for Tanit II.4-6 at 282, which shows us that urn density in II.4-6 is almost four times greater than that of Tanit I.1-3 (see *fig. 8* and caption), practically the same as Kelsey's ratio. Then also when we compare our pottery urns from these two periods (*figs. 11-12* from Tanit I and *figs. 13-14* from Tanit II), we see what enduring results Harden produced, combining his expertise in pottery typology with less than ideal stratigraphic excavations.

Pyre Burials in the Athenian Agora

For the scholars who have reasonable hypotheses or models to consider, there are just as many who have emotional, chauvinistic, or political reasons to ignore them. Because these interpreters have relatively nothing in evidence to construct more than an imagined model, they resort to academic swindling or to legerdemain. Some of the best and the brightest retreated into their comparanda, about which they knew very little. One of the most outstanding cases in point is that of the very

learned Phoenician doyen Sabatino Moscati, who in 1987 revised his views completely to embrace an imagined relationship between the Phoenician *tophet* precincts and saucer pyres of the Athenian Agora, bringing along with him many other archaeologists and other experts in the field who wanted to believe that child sacrifice was the bloody stain that ‘outsiders’ used to tarnish the reputation and accomplishments of the highly sophisticated Phoenician civilization (Moscati 1987; cf. 1965-1966). How could this great civilization once and for all time give us the gift of the alphabet, which we still use, and engage in the ‘barbaric’ rites of child sacrifice? So let us explore just how plausible the Agora analogue turned out to be.

Seventeen small pyres were found *in situ*, dating to the 4th-3rd century BC. The pyres had been burned in small pits. There were bones and miniature pottery vessels. Rodney Young reports that ‘we have somewhat reluctantly concluded to be the remains of infant cremations’, even though there was ‘an absence of identifiable human bones’. So why did Young suggest these were infant cremations? Because the pyres and their pits were too small to accommodate adults. That, and the miniature pottery were conclusive evidence, he thought, that these were cremated burials of infants (Young 1951).

Jean Rudhardt took all of this a step further by speculating that these cremations were not of ordinary children, but of Athenian orphans, who had died very young, either naturally or by exposure. The pyre burials of these infants served as a rite of purification (Rudhardt 1963; Rotroff 2013, 5). Then in 1987, the highly influential Phoenician scholar Sabatino Moscati did an about-face from his early writings about child sacrifice (Moscati 1987; cf. 1965-1966). To understand the *tophet* rites of Carthage, we should discount the tendentious classical and biblical texts and look to the Hellenistic world and to Athens, where the pyre burials involving cremated infants and animals provide the most convincing archaeological analogues to the *tophets* of the Phoenician world. Without citing Young’s primary report in *Hesperia* (1951), Moscati relied on Rudhardt’s secondary analysis and far-fetched interpretation of what were supposedly the cremated remains of burnt Athenian babies and animals.

Over 70 Saucer Pyres Catalogued by Rotroff

Lynn Snyder, a zooarchaeologist, has examined the burnt bones from the more recently excavated Agora pyres and has confirmed that all of the burnt bone be-

longed to ovicaprids (sheep/goat), not humans. The animal offerings were all ovicaprid, and when species could be identified the burnt bones belonged to sheep and represented the parts of the ovicaprid commonly burnt in Greek sacrificial practice (Rotroff 2013, 41). These were parts of the sheep/goat offered to the gods, not whole burnt offerings or holocausts, as is the case with the human and animal cremations in the *Tophet*. As Rotroff summarizes, ‘Snyder’s identification of the bones from pyres as animal rather than humans, and as animals of the species most favored for sacrifice, has definitely laid the hypothesis of baby cremations to rest’ (Rotroff 2013, 56). And delivered the coups de grâce to the hypotheses of Rudhardt and Moscati.

Another leading revisionist, claiming an archaeological and osteological basis for her work, is H el ene B enichou-Safar, who has studied hundreds of burials from multi-generational cemeteries excavated at Carthage during the past century (B enichou-Safar 1982). She found infants to be absent and very young children to be barely represented. To make up for this underrepresentation, B enichou-Safar pointed to the *tophet* as the site where ‘outcasts’ (still-borns, and the other as-yet-unrecognized members of society) were buried. Usually the perinatals and neonates are mostly invisible. If buried at all, they would be in shallow graves outside the ordinary cemeteries, under house floors, or under walls. Surely they would not be provided with elaborate burial rituals and paraphernalia like that of the cremated babies in the *Tophet*. Throughout the Mediterranean cemeteries have a significant underrepresentation of infants. That is also the case in the Phoenician cemetery at Achzib (Israel). In her analysis of 555 burials in Iron Age Judah, Elizabeth Bloch-Smith noted in 1992 that infants constituted only 10% of the total. Most of the *Tophet* burials are of infants 1-2 months old, the rest from 3-12 months (*fig. 24*). Paul Mosca (2013, 121) asks the question that B enichou-Safar has never been able to answer: ‘Where were older infants, children, and young adolescents buried? Why are there not tofet-like precincts to account for these missing dead?’

Schwartz 1993

When we began our excavations in the *Tophet* of Carthage in 1976, I wanted our study to be as holistic as then possible, and to give osteology a much more prominent emphasis than it had received from decades of excavations before ours. For that task I chose Dr. Jeffrey Schwartz of the University of Pittsburgh, longtime

friend and colleague in the excavations at Tell el-Hesi (Israel) and Idalion (Cyprus). He had experience in both zooarchaeology and physical anthropology. In 1980 he allowed me to cite some of the results from his preliminary study of 130 urns from the total of 444 that we excavated. I was convinced back then that Schwartz would provide the ‘first systematic study of datable urn contents’, which would provide ‘a wealth of data for future interpretations of the rite of child sacrifice’ (Stager 1980, 10). From his initial study, there were not too many surprises; most of the cremated infants were perinatal, newborn babies with some premature ones. Then came a long hiatus during which we received several revised lists, in which Schwartz and his graduate research assistant Frank Houghton (also second joint author in Schwartz *et al.* 2010; 2012) had changed their age estimates of the *Tophet* infants; but there was no osteological analysis that we could publish as a chapter in the final report volume. Then in 1993, Schwartz wrote a popular book, *What The Bones Tell Us*, with a lengthy second chapter entitled, ‘Infants, Burned Bones, and Sacrifice at Ancient Carthage’ (Schwartz 1993, 28-57). The results of his analysis of over 400 urns came as a complete surprise to me and those working on the final report. Schwartz reports:

‘...Approximately 81 percent of all the individuals in my sample (...) were late-third trimester fetuses. A more conservative estimate emerges when developmental criteria are combined with the measurements [of cranial and long bones]. As little as 54 percent but perhaps as many as 70 percent of the sample is composed of late-third trimester individuals. These statistics imply at least 54 percent, but possibly as many as 81 percent (...) died of natural causes before they were cremated – which means, of course, that most of the individuals in this sample had not been sacrificed in the sense of being victims of a blood-killing’ (Schwartz 1993, 53).

Schwartz goes on to conclude that 10 percent of the *Tophet* children ‘could have lived long enough after birth to be sacrificed, but that still leaves approximately 90 percent that represent stillbirths, spontaneous abortions and neonatal victims of natural deaths’ (Schwartz 1993, 56). Many of those infants buried in the *Tophet* were not then sacrificed, but were the ‘remains of the unfortunate young and unborn. And because these unfortunate unborn and neonates had met with premature deaths, they were treated differently from others who had died naturally but had done so later in life’ (Schwartz 1993, 57).

Schwartz had clearly joined the ranks of the revisionists. Then and now the notion that a burnt human stillborn fetus would be made as a votive offering to the gods

(as thousands of *Tophet stelae* attest, see *fig. 16*) appears to me quite absurd in light of ancient West Semitic religion. On most of the inscribed stelae the word *ndr* appears, meaning 'vow'. Just below the monument (see *figs. 9-10*) lies the incinerary urn containing whole burnt offerings or holocausts (Hebrew *'ôlôt*), the promised sacrifice if the deity granted the dedicant's prayer or favor asked. The holocaust offerings, whether human infants, lambs (or kids) or birds were completely burned leaving few tangible remains. For infants this might be ribs, cranial parts, petrous (inner ear) bones, and most tellingly teeth, whether erupted or in germ stage. In the perinatal stage of cremation burials expert forensic analysis of the dentition is essential in determining the age of infants, which can be determined in newborns or gestational ones within two weeks. Throughout the Levant the vow once made and fulfilled was irrevocable.

In 2000 I asked Schwartz to return all of the osteological evidence from the Carthage *Tophet* that he had in his possession for the past two decades. I wanted a second opinion on the urn contents, both the human and non-human animal cremated remains. To study the human infants, I turned to the prominent physical and forensic anthropologist, Professor Patricia Smith and her team (with whom I had worked for years at the excavations at Ashkelon).

Schwartz et al. (2010; 2012) versus Smith et al. (2011; 2013)

Where the two analyses differ most in age estimations are in the period prenatal to 2 month-old babies. Schwartz *et al.* have 24% fetuses, 32% died at birth, with only 12% in the 1-2 month cohort. Smith *et al.* argue for 67% in the 1-2 month cohort, and a questionable 0.7% cremated fetuses in the prenatal category (*figs. 23-25*). In the 3-12 month cohort their results are similar (*fig. 24*).

Although Schwartz has scaled down the percentage of fetuses considerably since the 1993 publication, he still retains his generic definition of *tophet* precincts, namely 'cemeteries for those who died shortly before or after birth, regardless of the cause'. Although the infants had already died, mainly from natural causes, and were then cremated, he admits that a few might have been sacrificed. Schwartz *et al.* (2012), while avoiding texts on the monuments, gratuitously include the well-known stela of the Carthaginian priest carrying the infant to the cremation site (*fig. 29*), in support of their notion that the *Tophet* is a children's cemetery. They misinterpret the iconography, claiming the child is already dead.

Schwartz's ahistorical model explains everything and therefore nothing. It lacks clarity, specificity, and evidence. He ignores texts, including the inscriptions in Punic carved on *stelae*, many sitting directly above the cremation urns. He follows Bénichou-Safar, who thinks the Carthaginians cremated a dead baby in hope of receiving a replacement. But this totally misses the point of the votive monuments. It is clear from the inscriptions that the favor or supplication has already been answered and the offering is the dedicant's response, 'because he [the deity] heard his [the dedicant's] voice and blessed him' (see *fig. 16* and caption).

One of the innovations in methodology that Schwartz *et al.* introduce to *tophet* studies is the significance of the neo-natal line (NL), which marks the change in tooth enamel that formed in the womb from that formed outside the womb in babies that survive a week after birth. This can be a reliable age marker before or right after birth. But Schwartz and his team do not accept experiments that indicate that teeth also shrink and can be transformed by cremation. Smith and her team bring evidence that contradicts this notion. Cremation can in many cases change the enamel in milk teeth and molars so much as to totally obliterate the NL. Because Schwartz *et al.* denied this evidence and could not find the NL, they underestimated the age of so many of the cremation burials in the *Tophet*. In fact, some living children who reached four to five years of age have been examined and found to have no NL. So while a good method, NL needs to be considered on a case-by-case basis.

Also Smith criticizes Schwartz for not considering enough shrinkage that occurs during cremation in other skeletal remains. Then when he compares these cremated individuals with charts from non-incinerated babies in cultures with relatively modern health care, of course, the *Tophet* infants will be undersized and under-aged by those standards. Smith *et al.* conclude that their studies have shown that age estimations of cremated infant remains need to 'compensate for differential shrinkage'. 'We found that age estimations based on the developing teeth were more consistent and reliable than those based on the petrous bone. Our results confirm that the age distribution of the *Tophet* infants is markedly different from that characteristic of infant cemeteries and peaks at 1-1.49 months. This unique age distribution is another link in the chain of evidence – funerary practices, texts, iconography – that supports the interpretation of the Phoenician *tophet* precincts as ritual sites set aside for infant sacrifice' (Smith *et al.* 2011).

Because of Smith's superior knowledge of forensic dentition and her comparative data bank, I think that is wiser to take our analysis very seriously. Whereas

Schwartz has changed his age estimates numerous times over the past decades and endorsed a very implausible *tophet* scenario that is lacking any solid evidence.

It is not easy for zooarchaeologists to distinguish sheep (*Ovis*) from goats (*Capra*) even in the best of circumstances, even more so when the animal has been cremated. When scientists cannot distinguish one from the other, they usually refer to them as ovicaprines. But today their techniques are much more sophisticated than they were a few years ago in disambiguating the two. There were at least 141 urns with *Ovis* in them. From this group 37% had only sheep; 63% had both human and sheep cremated remains. The *Ovis* sacrifices were all lambs, most falling within the 1-3 month age range, but the 3-6 month old lambs increased during Tanit II.4-6 and III.7 (see *fig. 26*).

The burial practices for the humans and animals were identical: whole burnt offerings on an open-air pyre, fueled mainly by *Pistacia lentiscus* in Tanit I, before major deforestation in the city, and mostly by olive wood thereafter (see Stuijts in Docter *et al.* 2001-2002; Van Zeist *et al.* 2001). The fires reached above 700 degrees Celsius bleaching the human and animal bones bluish-white, but also on some of the same skeletons there were reddish-yellow bones indicating temperatures as low as 200 degrees Celsius. (*figs. 6-7, 19*). This means cremation was done on an open-air pyre in all phases, with variant heat levels. Both the human and animal charred remains were placed in urns in pits, sometimes the votive monument still *in situ* (see *fig. 9* with human infant in urn beneath sandstone monument dating to early Tanit II, and *fig. 10* with ovicaprine, very probably a 1-3 month old spring lamb, with sandstone monument marking the burial site of a Tanit I urn). From our large urn sample 53 urns contained *Ovis* only, 88 urns contained both human and lamb charred remains (see *fig. 26*). The only difference between the animal and human burials is the presence of apotropaic amulets in ca. 25% of the infant cinerary urns, but the necklaces never showed traces of burning; they were obviously added after the cremated remains had been placed in the urn (*figs. 18, 20-22*).

The gestation period of a sheep is ca. 5 months. In North Africa lambing occurs in both fall and spring. Peak periods for fall lambs, the 3-6 month old cohort, are October–November, mating occurring in June. For the spring lambs, the 1-3 month old cohort, born in February–March, mating occurring in October. Since our zooarchaeologist Deirdre Fulton found two or more individual lambs in 24 urns, and in each period some examples of the spring lamb and fall lamb together

in the same urn. It follows that the 3-6 month old lambs were slaughtered and offered as holocausts along with the 1-3 month old lambs at the same time, i.e. in the spring, March-April.

A few of the urns also had partridge (*genus Perdix*) usually along with human remains, but a couple with lamb only remains. Another two urns had burnt fish bones. As Fulton notes, the animals at Carthage resemble what we have seen at other Phoenician *tophet* precincts (*fig. 1*): for example, Tharros in western Sardinia has numerous spring lambs, indicating that sacrifices there took place at spring First Fruits sacrificial festivals (Fedele/Foster 1988) and Motya, Sicily, had similar findings. We can add to this Carthage: first, examining only a dozen urns from its *tophet*, Roald Docter *et al.* (2001-2002) made the prescient observation based on the presence of spring lambs that the sacrifice took place then. Now that we have studied hundreds more of the *Tophet* urn contents we can confirm this conclusion.

These in Israelite contexts appear in reified form revealing old Canaanite and annual harvest festivals, and pilgrimage to the Jerusalem Temple. The spring fest occurred at the time of the barley harvest; seven weeks later or fifty days later Pentecost, the time of the summer wheat harvest, and a fall pilgrimage at the grape and olive harvest (Garnand/Stager/Greene 2013).

In 25% of the burnt offerings we find human infants and lambs in the same urn, obviously cremated at the same time on the same pyre in the spring, to judge by the spring lambs 1-3 months old (see *figs. 26-27*). These are related to 'paschal' lambs in the Israelite spring pilgrimage festival, hearkening back to the cycles of nature and the seasonality of Old Canaanite agricultural life, celebrating First Fruits. Clearly many of the *ex voto* were offered periodically rather than occasionally as individual cremations. The cremated lambs confirm that *mlk ʿmr*, which appears on certain *stelae* inscriptions, means the sacrifice/offering of a lamb (see also the fat-tailed lamb on a Tanit III votive *stela*, *fig. 28*). The term is transcribed as *molchomor* in Latin on later *tophet stelae* from Nicvibus (mod. N'gaous, Algeria). We still see reflections of these Canaanite/Phoenician harvest festivals in the seasonal awakening (*egersis*) of Melqart of Tyre and the great spring pilgrimage festival held at Hierapolis in Syria, as described by the Roman writer Lucian:

'Of all the festivals I know, the greatest is the one they celebrate at the beginning of Spring; some call it the Fire Festival, and others the Torch. At this time they

make the following sacrifice. They cut down tall trees and set them up in the court [of the temple; LS], and after that they bring goats and sheep and other live animals and hang them from the trees; together with them are birds, and clothes, and gold and silver objects [amulets; LS]. Everything once complete, they carry the offerings round the trees and set fire to them; the whole lot immediately go up in flames [the holocaust sacrifice; LS]. Many people come to this festival from Syria and all the surrounding countries [including Phoenicia; LS], and they all bring their own offerings and have standards fashioned in similitude.’
Lucian, *De Dea Syria* 49 (Translation: Lightfoot 2003)

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It is a great honor to be invited by the Board of the BABESCH Foundation to give the Eighth Annual Byvanck Lecture. I especially want to thank Professor Roald Docter, Vice-President of the Foundation, who gave so much of his time and invaluable advise, as he edited and shepherded my lecture through to publication. I am extremely grateful to Drs. Joseph Greene, Brien Garnand, and Deirdre Fulton for providing me with the most up-to-date data we have for the human and animal remains as well as related archaeological materials from the Carthage digital archives for the *Tophet*.

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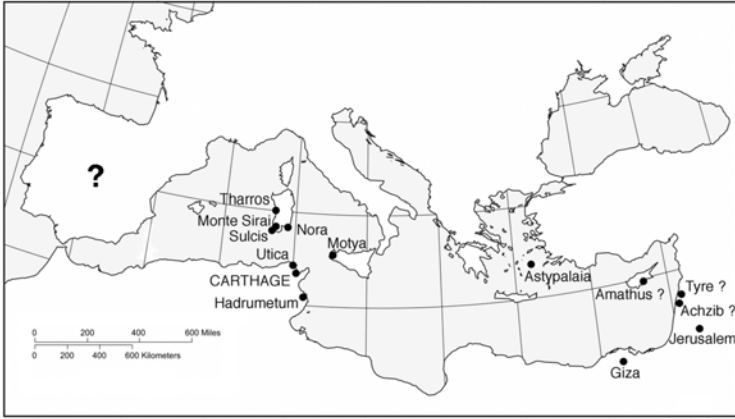


Fig. 1. Map of Mediterranean with main tophet sites in Sicily, Sardinia, and North Africa indicated.



Fig. 2. Carthage, looking south over the Military (Circular) Harbor in foreground, Commercial (Rectangular) Harbor beyond.



Fig. 3.
Plan of the two harbors looking north, Tophet west of Commercial Harbor.



Fig. 4. Some members of the Franco-American expedition (1925), under the direction of Francis Kelsey (second from the right), of the University of Michigan. He continued the excavations begun the previous year by the flamboyant 'Count' Byron Khun de Prorok (third from the left).



Fig. 5. General view of Carthage Tophet looking west. The monuments, mostly sandstone blocks (cippi) and limestone slabs (stelae) from Tanit II, were exposed and left standing in situ by the Kelsey excavations of 1925. Our trench (150 m²) yielded 444 cinerary urns. In the foreground (Square 1) are Stager (left) and Douglas Esse (right), to the west are a Tunisian workman (standing), Joseph Greene (Square 5), and beyond (Square 6) Samuel Wolff.



Fig. 6. Very early 8th-century BC bichrome amphora with unbaked clay stopper and lid in situ, placed in bedrock pit.



Fig. 7. Same cremation urn with stopper and lid removed, exposing the charred remains of 1-2 month old human infant.

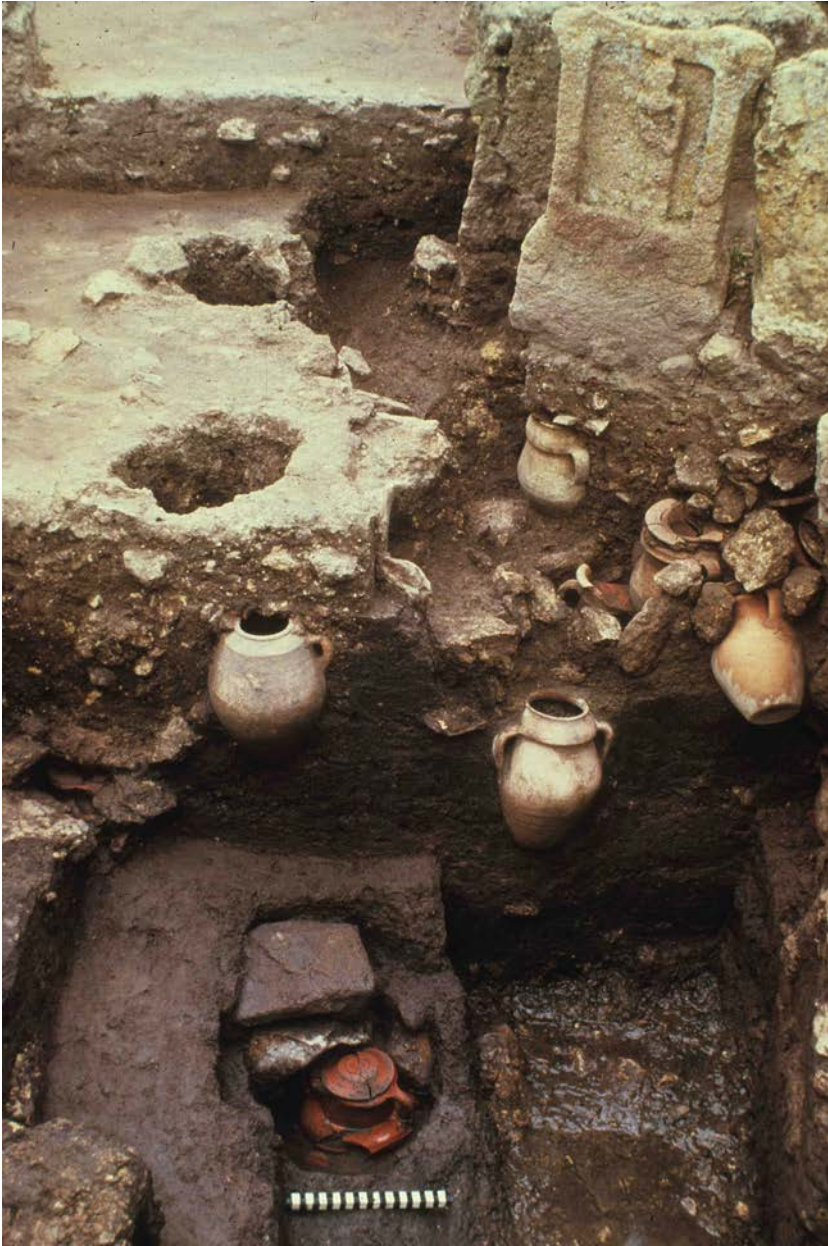


Fig. 8. Sequence of stratified cinerary urns from ca. 800 BC-300 BC. Foreground very early Tanit I urn in bedrock and marsh pit with stone slabs over the burial pit. Above are Tanit II urns and at the top a sandstone cippus has a carved relief of a female musician or the goddess Tanit/Astarte, holding a hand drum and standing in a shrine or temple.



Fig. 9. Joseph Greene excavates a Tanit II urn surmounted by a sandstone monument. The urn, buried in a stone-lined pit, contains a newborn infant (neonate) less than a month old.



Fig. 10. L-shaped sandstone 'throne' monument marks a Tanit I urn, which contained the charred remains of a 1-3 month old sheep (Ovis) or a goat (Capra) offering, most probably a spring lamb.



Fig. 11. Tanit I, 8th century BC cremation amphora with red slip.

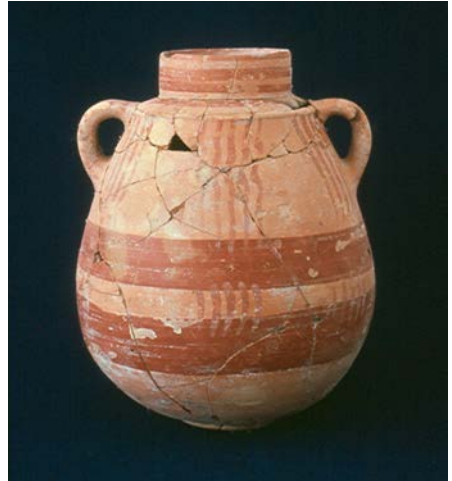


Fig. 12. Tanit I, 8th century BC bi-chrome cremation amphora with horizontal red slipped burnished bands and vertical black squiggly line groups (triglyph-metope design).



*Fig. 13.
Early Tanit II one-handed jug.*

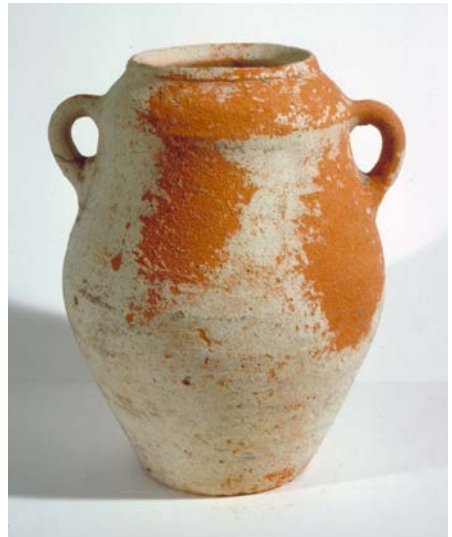


Fig. 14. Plain ware Tanit II amphora.



Fig. 15. Micritic gabled limestone stelae of the 4th century BC with urns around and beneath. The urn between the two gabled monuments is capped with a two-spouted lamp. In the balk to the right the gabled stela has a long incised Punic inscription, which names the dedicant as 'Esmun-ħilliš. The urn beneath contains the cremated remains of an infant.

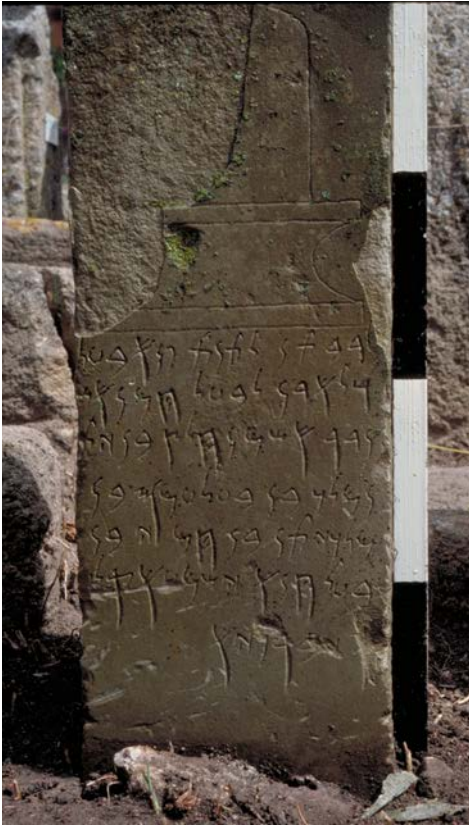


Fig. 16. Close-up of the 'Ešmun-ḥilliš stela, ex situ. It reads:

lrbtn lntn pn' b'l wl'dn lb'l ḥmn 's ndr
 'šmnḥlš bn ytnmlk bn b'l' ms bn mlkytn
 bn hmy bn b'lh'n' ysm' 'ql 'ybrky'

The stela records the genealogy of the dedicant back five generations and is dedicated 'to our lady, to Tanit, the Face of Ba`l, and to our lord, to Ba`l Ḥamon, that which was vowed (by) 'Ešmun-ḥilliš, son of YTNMLK, son of B`L`MS, son of MLKYTN, son of HMY, son of B`LHN', because he [the deity] heard his [the dedicant's] voice and blessed him.'



Fig. 17. Tanit III thin limestone gabled stela flanked by acroteria, Tanit symbol incised below the typical inscription; disc and crescent, usually identified with Ba`al Ḥamon in gable above.



Fig. 18. Jeffrey Schwartz, staff osteologist of our excavations developed an effective system for extracting urn contents without damaging the fragile burnt bones, which all 444 urns contained; and about a quarter of them also had delicate beads and amulets which were placed in the urns after the human was cremated. Schwartz and his assistants used a gentle flow of water to loosen the urn contents and then emptied onto a mesh screen through which the soil and ash filtered, leaving the bones and other residues to dry. Once dry Schwartz sorted the remains and gave a preliminary analysis of the bones.



Fig. 19. Charred remains of a lamb offering. The bluish-white bones were burnt in an open-pyre fire that reached ca. 700 degrees Celsius; the dark even blackened bones were charred at sometimes as little as 200 degrees.



Fig. 20.
Beads and amulets
from a necklace
placed in an urn
with a human in-
fant after crema-
tion.



Fig. 21. Finest ensemble of bone amulets and pendants from a necklace offered with human infant after cremation: including in-the-round carved bone dog scratching his muzzle with right hind leg; 'Siamese' twin crouching felines peering over their backs; phallus with eyes carved into the glans and a pierced scrotum; one tubular spacer bead and two circular beads; a carved and pierced bone plaque of a reclining bovine with head turned back (probably a cow) and an aleph incised on the back side of the plaque; a shell spacer bead; and three metal objects, including a miniature bell, a ring, and a long bead. Several pendant phalli, with less detailed carving, were found in other urns. The eyed phallus, eye beads, and other amulets served an apotropaic purpose to ward off the 'evil eye' and other dangers, of which children were especially vulnerable.

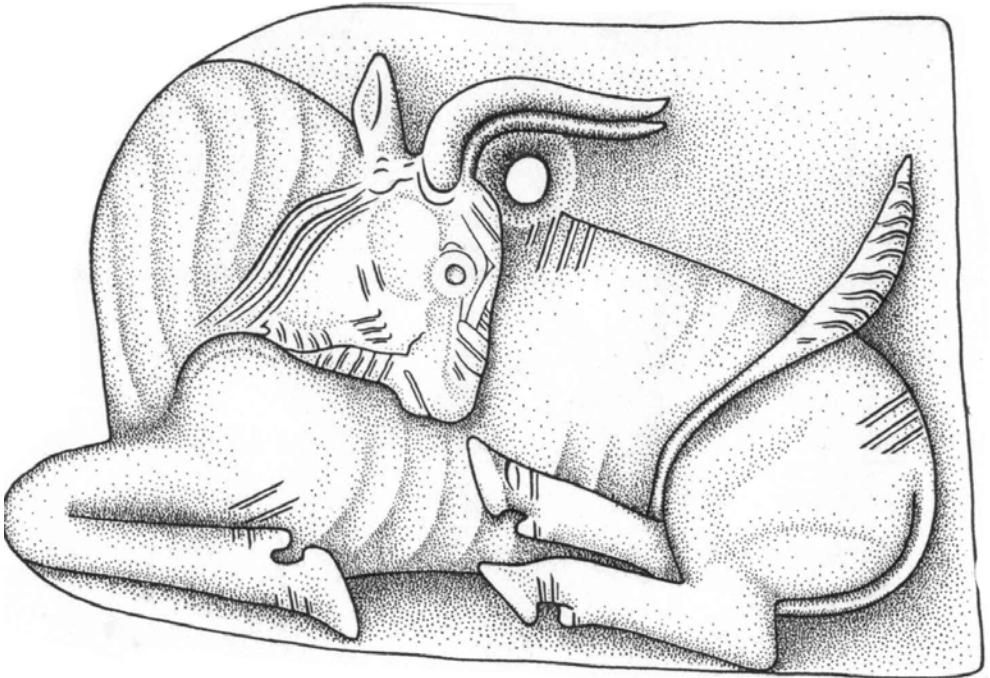


Fig. 22. Drawing of the reclining bovine.

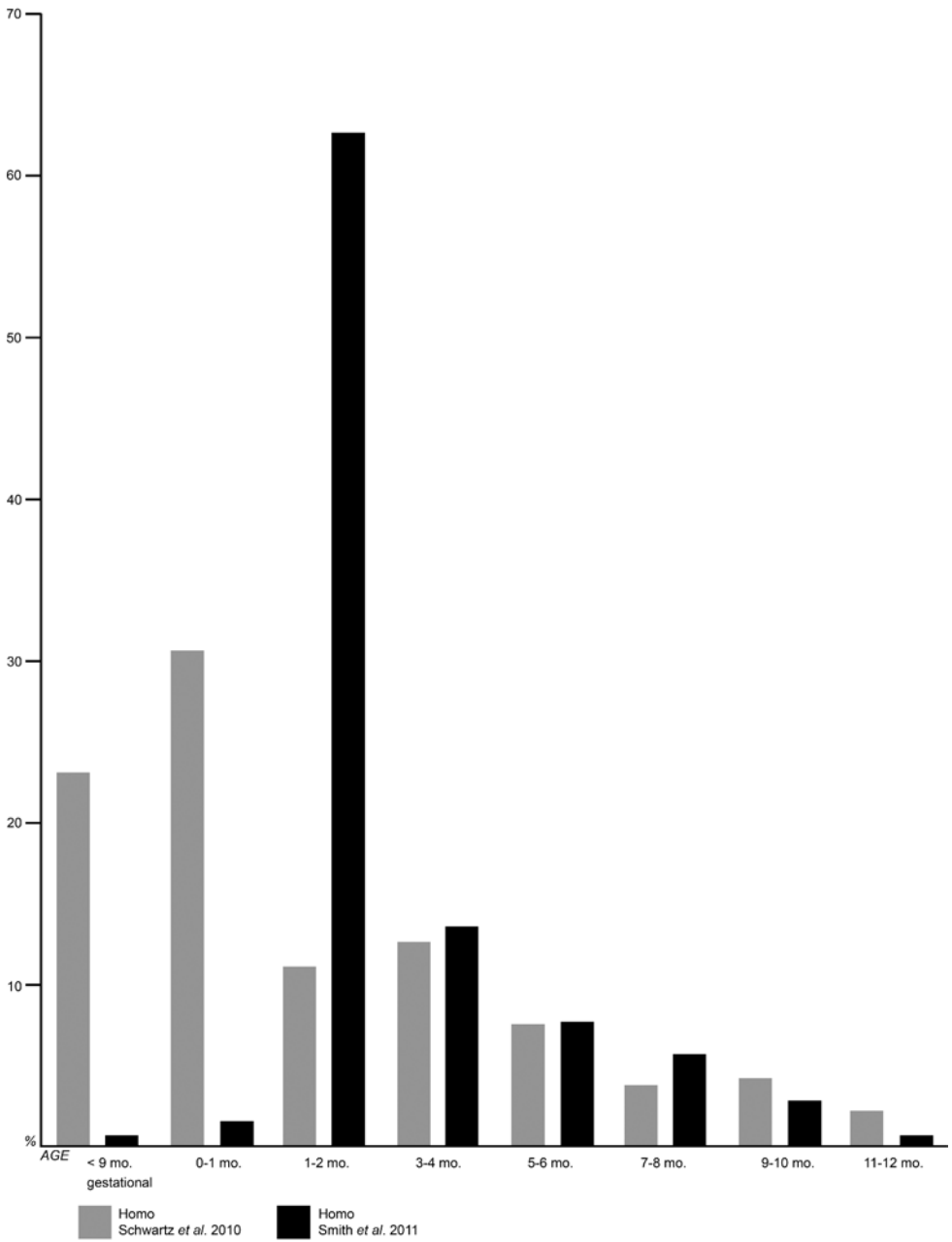


Fig. 23. Age distribution of infants from the Carthage Tophet from our excavations, comparing the results of Schwartz et al. and Smith et al., from 8 months gestational to 12 months old. (Fig. 2 from Garnand/Stager/Greene 2013, 221).

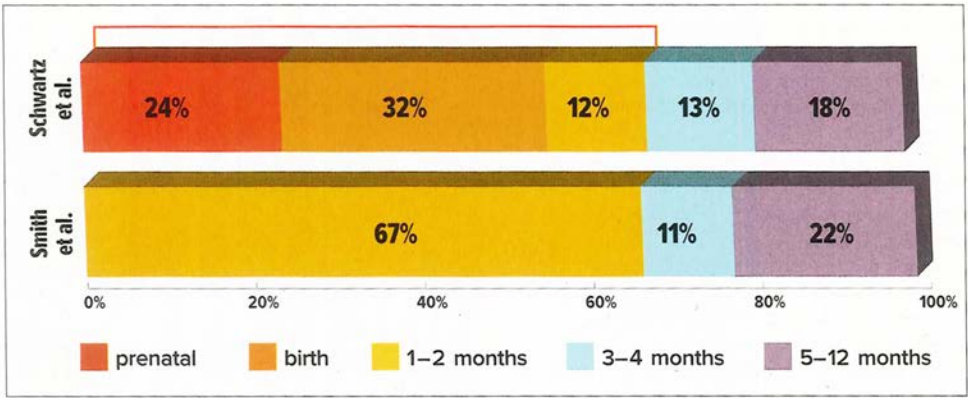


Fig. 24. Simplified comparison of same data base (Smith 2014: 56).

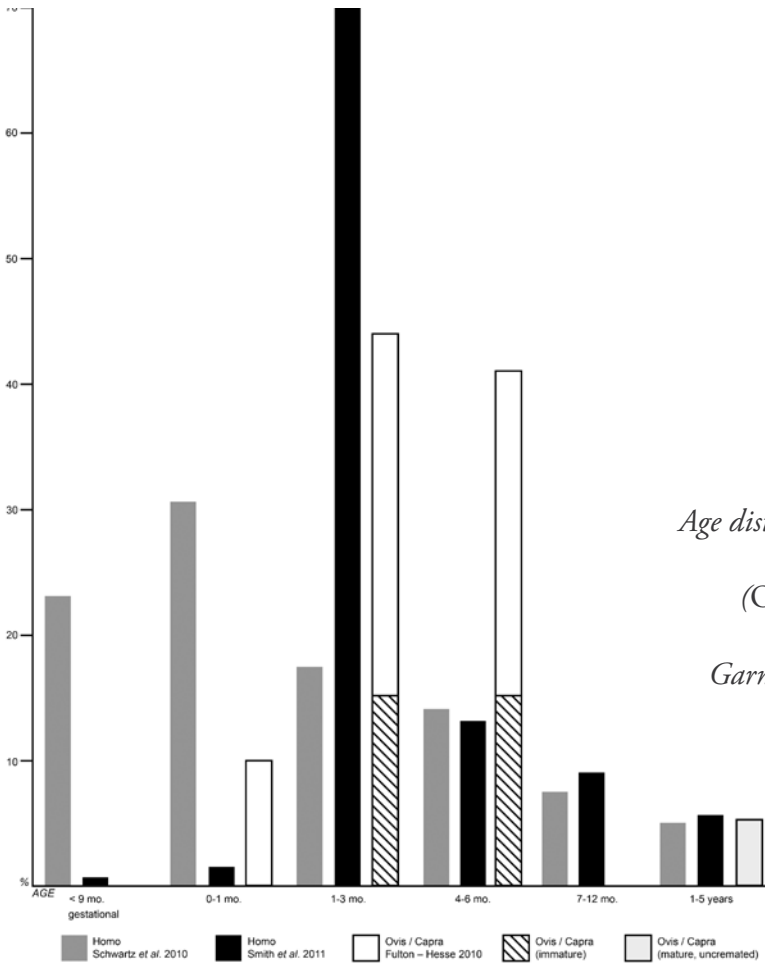


Fig. 25.
Age distribution of infants
and juvenile sheep
(Ovis)/goats (Capra)
(Fig 3. from
Garnand/Stager/Greene
2013, 222).

DISTRIBUTION OF HUMAN AND FAUNAL REMAINS

Urns with Bones Present or Absent (percentages do not indicate quantity – e.g. one or four individuals each count as one urn with bones present)

	I.1 (n.13)	I.2 (n.25)	I.3 (n.34)	II.4 (n.61)	II.5 (n.84)	II.6 (n.137)	III.7 (n.74)	III.8 (n.9)	I-III (n.437)	III.7-8 (83)
Homo only	8	10	24	37 (1*)	38 (1*)	82 (3*)	36 (8*/1**)	2	237	38 (8*/1**)
	61%	40%	70%	61%	46%	60%	49%	22%	54%	46%
Ovis only (poss. Capra)	3	6	5 (1*)	7	12	13 (1*)	6	1	53	7
	23%	24%	15%	11%	14%	9%	8%	11%	12%	8%
both	1	6	4 (1*)	11 (3*/1**)	22 (1*)	27	14 (1*)	3	88	17 (1*)
	8%	24%	12%	18%	26%	20%	19%	33%	19%	21%
neither	1	3	1	6	12	15 (1*)	18	3	59	21
	8%	12%	3%	10%	14%	11%	24%	33%	25%	25%

* urns with bird

** urn with fish

NB this excludes four un-phased urns: 4774, 5592, 6350, 6394 (only last had analyzable bones, both Homo and Ovis)

Fig. 26. Distribution of Human and Faunal remains from same urn sample as above 24-26 (based on analyses of Smith et al. 2011 and 2013; Smith 2014; Fulton, Williams/Wapnish forthcoming).

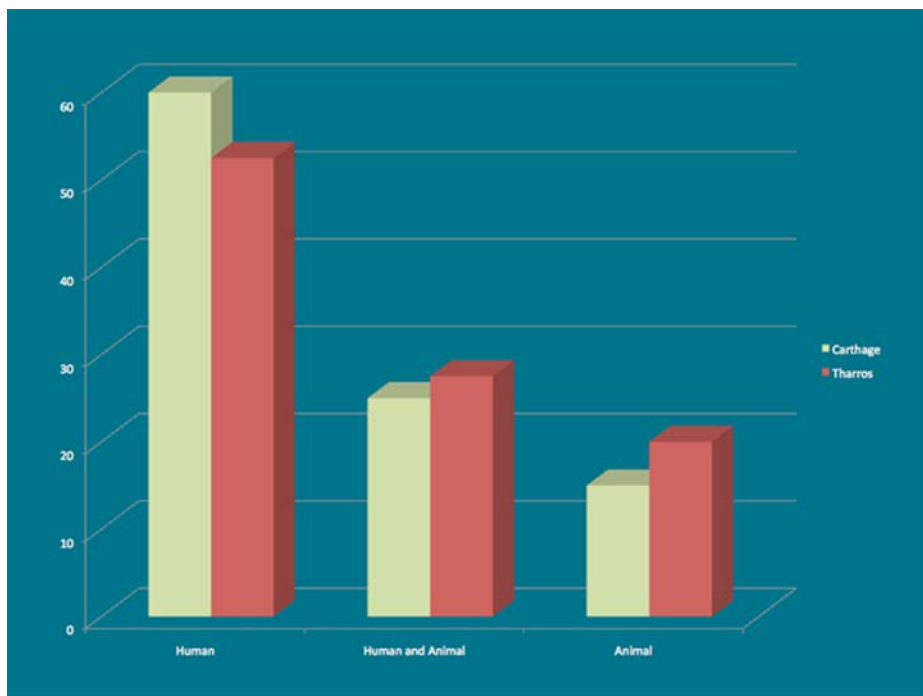


Fig. 27.

Comparison of Carthage and Tharros: tophet human and faunal (animal) identifiable cremated remains.



*Fig. 28.
Fat-tailed lamb
incised in
Carthage Tanit
III votive
monument.*

Fig. 29. Priest cradles an infant in his left arm, apparently in preparation for a sacrificial offering. This scene is engraved on a limestone stela of the 4th century BC, found in the 1920's in one of the earliest excavations in the Carthage Tophet.



Fig. 30. Tanit II monuments in situ under a Roman foundation vault.

Lawrence Stager (1943) started his scholarly career in 1965 as a graduate from Harvard College in Archaeology and History of the Ancient Near East, earning his PhD in 1975. After teaching Syro-Palestinian Archaeology at the Oriental Institute of the University of Chicago for over a decade, he returned to Harvard in 1985 as Doro Professor of the Archaeology of Israel and Director of the Semitic Museum.

In 2012 Stager retired after 40 years of teaching and serving as primary director of over fifty doctoral students and their dissertations. His field research and writing have focused on Canaanites, Phoenicians, Philistines, and Israelites. From 1975-1980 he directed the Punic Project at Carthage, with excavations at the Commercial Port and in the Tophet. From 1985 up to the present, he has been directing (recently with Daniel Master) the Leon Levy Expedition to Ashkelon, one of the largest and lengthiest excavations programmes in Israel.

Among his popular works is the award-winning *Life in Biblical Israel* (2002; co-authored with Philip King) and *Ashkelon Discovered: from Canaanites and Philistines to Romans and Muslims* (1991). His volume *Ashkelon 3: The Seventh Century B.C.* (2011) won the Levi-Sala Book Prize. A new book, *Ashkelon: Seaport of the Canaanites and the Philistines*, is due to be published next year. In 2008 Lawrence Stager was honored with a Festschrift (D. Schloen ed., *Exploring the Longue Durée*), with a rich array of essays reflecting the range of Stager's intellectual interests.

