



The Archaeology of Anatolia

Volume II

Recent Discoveries (2015-2016)

Edited by Sharon R. Steadman
and Gregory McMahon

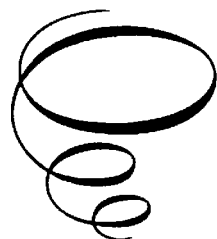
The Archaeology of Anatolia Volume II:

Recent Discoveries (2015-2016)

Edited by

Sharon R. Steadman
and Gregory McMahon

Cambridge
Scholars
Publishing



The Archaeology of Anatolia Volume II: Recent Discoveries (2015-2016)

Edited by Sharon R. Steadman and Gregory McMahon

This book first published 2017

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data
A catalogue record for this book is available from the British Library

Copyright © 2017 by Sharon R. Steadman, Gregory McMahon
and contributors

All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright owner.

ISBN (10): 1-4438-7953-3
ISBN (13): 978-1-4438-7953-8

TABLE OF CONTENTS

List of Figures.....	viii
List of Tables.....	xiv
Chapter One.....	1
<i>Introduction to The Archaeology of Anatolia Volume II</i>	
Sharon R. Steadman and Gregory McMahon	
Part I: Excavations	
Chapter Two.....	6
<i>Continuous Change: Venturing into the Early Chalcolithic at Çatalhöyük</i>	
Jana Anvari, Jacob Brady, Ingmar Franz, Goce Naumov, David Orton, Sonia Ostaptchouk, Elizabeth Stroud, Patrick T. Willett, Eva Rosenstock, and Peter F. Biehl	
Chapter Three.....	40
<i>Salat Tepe: Overview of the Stratigraphic Sequence and the Early EBA Levels Excavated in the Last Two Seasons</i>	
A. Tuba Ökse	
Chapter Four.....	66
<i>Arslantepe, Malatya: Recent Discoveries in the 2015 and 2016 Seasons</i>	
Marcella Frangipane, Federico Manuelli, and Cristiano Vignola	
Chapter Five.....	94
<i>The 2015–2016 Seasons at Çadır Höyük on the North Central Anatolian Plateau</i>	
Sharon R. Steadman and Gregory McMahon	
Chapter Six.....	117
<i>A Key Site in Urartian Archaeology: Recent Fieldwork at the Ayanis Castle (Rusaşinili Eiduru-Kai)</i>	
Mehmet Işıklı	

Chapter Seven.....	137
<i>The Neo-Hittite Citadel Gate at Tayinat (Ancient Kumulua)</i>	
Elif Denel and Timothy P. Harrison	
Chapter Eight.....	156
<i>The Kerkenes Project 2015–2016</i>	
Scott Branting, Joseph Lehner, Sevil Baltalı-Tırpan, Sarah R. Graff, John M. Marston, Tuna Kalaycı, Yasemin Özarslan, Dominique Langis-Barsetti, Lucas Proctor, and Paige Paulsen	
Chapter Nine.....	178
<i>Sinop Kalesi Archaeological Excavations, 2015–2016 Field Seasons</i>	
Owen Doonan, Hüseyin Vural, Andrew Goldman, Alexander Bauer, Jane Rempel, Susan Sherratt, Ulrike Krotschek, Paolo Maranzana, and Emine Sökmen	
Chapter Ten.....	200
<i>Recent Fieldwork at Tarsus–Gözlükule: The Medieval Levels</i>	
Ashlı Özyar, Elif Ünlü, Oya Pancaroğlu, and Agnès Vokaer	
Chapter Eleven.....	230
<i>Excavation and Analysis of the Kızılburun Column Wreck: Construction Processes of Doric Peristyle Columns in the Late Hellenistic and Early Roman Periods</i>	
William Aylward and Deborah Carlson	
Part II: Surveys	
Chapter Twelve.....	258
<i>Houses on an Island: Boğsak (Astéria in Isauria) in Late Antiquity</i>	
Günder Varinlioğlu and Mine Esmer	
Chapter Thirteen.....	279
<i>Lower Göksu Archaeological Salvage Survey Project: The Results of the 2015–2016 Seasons</i>	
Tevfik Emre Şerifoğlu	
Chapter Fourteen.....	302
<i>Lake-Places, Local Hydrology, and the Hittite Imperial Projects in the Ilgın Plain: Yalburt Yaylası Archaeological Landscape Research Project 2015–2016 Seasons</i>	
Ömür Harmanşah, Peri Johnson, Ben Marsh, and Müge Durusu-Tanrıöver	

Chapter Fifteen	321
<i>Living on the Margins: First Results from the Dereköy Archaeological Survey of the Sagalassos Project in the Western Taurus Mountains</i>	
Ralf Vandam, Patrick T. Willett, and Jeroen Poblome	
Chapter Sixteen	347
<i>From the Konya Plain to the Bolkar Mountains: The 2015–2016 Campaigns of the KEYAR Survey Project</i>	
Çiğdem Maner	
Chapter Seventeen	374
<i>Revealing the Topography of Ancient Isaura through SFM Photogrammetry</i>	
Nevio Danelon and Maurizio Forte	
Chapter Eighteen	400
<i>Sampling the Ionian Landscapes: An Overview of the Archaeological Surveys in the Klazomenean and Teian Chorai</i>	
Elif Koparal, Yaşar E. Ersoy, Michele Massa, and Volkan Demirciler	
Contributors to the Volume	426
Index	442

CHAPTER TEN

RECENT FIELDWORK AT TARSUS— GÖZLÜKULE: THE MEDIEVAL LEVELS

ASLI ÖZYAR, ELİF ÜNLÜ, OYA PANCAROĞLU,
AND AGNÈS VOKAER

INTRODUCTION AND HISTORY OF RESEARCH¹

Founded in the Neolithic Period on the banks of the Kydnos/Berdan River, the settlement mound of Gözlükule in Tarsus, Cilicia took its present shape over the course of more than eight millennia. The site continued to be used for monuments and habitation in the Ottoman and following Turkish Republican period. During the 19th century European diplomats and travelers in the region began to pay attention to the mound as the locus of remains associated with classical Tarsos and dug sondages in search of antiquities (Goldman 1950: 297-8). Some of these antiquities are today in the collections of the British Museum and the Louvre. It was not until pioneering female archaeologist Hetty Goldman and her team began to excavate the mound in search of settlement remains during the early years of the Turkish Republican period, with an official permit, that the longevity of habitation at the site was realized. Their expedition started in the years before World War II and concluded shortly after. The project was mainly sponsored by Bryn Mawr College, still home to the Goldman excavation archives, and partly by the Fogg Museum of Harvard University and the Archaeological Institute of America. The results of fieldwork were published in a series of preliminary reports; for a bibliography see Goldman 1950: v-vi. These were followed by a final analysis in three volumes of text accompanied by three volumes of plates documenting the exposed depth of stratification and associated finds down

¹This section provided by Aslı Özyar.

to its Neolithic beginnings (Goldman 1950, 1956, 1963). The Goldman publications remain essential for the student of ancient Anatolia and its Eastern Mediterranean connections.

The Goldman final reports cover in stratigraphic order the Neolithic to Bronze Age, the Iron Age, and the Hellenistic to Roman period. A fourth volume was planned to document the Medieval period but never appeared. Goldman had entrusted Florence Day with the publication of the Early Islamic period. Day begun to study and sort the bulk of the material finds, catalogued her observations in files, and published two short interim articles. She passed away before finishing the task, so that the documentation of the meticulously dug and recorded traces of Early Islamic period habitation on the top level of the mound remained confined to the pages of the field diaries and her archived files through the second half of the 20th century.² It is these as yet unpublished Early Islamic levels that the second round of excavations at Tarsus began to unravel, as will be explained below.

Towards the beginning of the 21st century the last surviving member of the Goldman team, who became the leading scholar of Anatolian archaeology, Machteld Johanna Mellink, initiated the start of a new project centered on the venerable urban mound increasingly engulfed by the sprawl of present-day Tarsus.³ The home institution of the new project thus became Boğaziçi University, licensed and sponsored by the Turkish Ministry of Culture and Tourism. The initial phase was carried out in cooperation with Bryn Mawr College, whose students have continued to participate regularly in fieldwork. The goal of the current Boğaziçi University Tarsus-Gözlükule Excavation Project is multi-faceted and layered. The ultimate aim is to preserve the site as the ancient urban mound that it is, enshrined by continuous urban development, thus as a landscape monument marking deep time and anchoring the past and present settlement of Tarsus in the vast alluvial plain of Cilicia. The project will contribute to the effort to foreground this aspect of the site specifically by keeping intrusive and inherently destructive archaeological interventions to a minimum and by promoting the practice of a long-term

²Mellink had entrusted the files prepared by Day upon her passing away to Howard Crane, renowned scholar in the field of Islamic art and architecture, and Crane handed these over to the new field project of Boğaziçi University.

³Mellink, the sole surviving member of the Goldman team, proposed in 1998 to myself, her last Ph.D. student at Bryn Mawr College, to begin a new excavation project at Gözlükule, this time under the auspices of a Turkish university, and to bridge the former and the new home of the project. She continued to encourage and support this endeavor in myriad ways.

research presence on site. Studying the forming of this mound and its environs with students, specialists, and interested inhabitants of modern Tarsus on location and over long years will provide the town with an open-air laboratory, a sort of playground for the curious mind. One further principal goal of this new project is to play a part in making the mound a place of memory by laying a physical and mental path on the site to remember and to celebrate the history of previous engagement with this cultural monument and the locally forgotten protagonists of these encounters. Another aim of the project is to kindle interest in the cultural and natural landscape in which the mound is nestled, to foster its appreciation in various ways, including from the artistic perspective. The more immediate archaeological goal of this project appears modest and somewhat technical when compared to the above cited aspirations for the *longue durée*: it is to investigate cultural change and its implications during the transition from the end of the Late Bronze Age to the Iron Age. This has developed as part of a recent surge in scientific interest in the region.⁴ In other words the aim is to study, from the particular vantage point of Cilicia, the collapse of the Eastern Mediterranean Bronze Age world system. It is expected that studying this period will shed light on why we observe tenacious cultural continuities persisting through the breakdown of polities alongside new beginnings, which harbour seeds of change. It is in the process of reaching the levels pertaining to this transition that stratified medieval remains dating primarily to the Early Islamic period were uncovered.

The first phase of work (2001-2006) focused on the one hand on examining the present, in other words the post-Goldman configuration of the mound, and on the other hand on revisiting the vast study collection of ceramics and small finds handed over by the Goldman team in 1950 to the Adana Museum. It became immediately clear that it was of paramount importance for new research to engage closely with the material finds unearthed by the previous excavation. Therefore all of these, except for the smaller percentage of inventoried objects, which remain to date in the Museum of Archeology in Adana, were brought back to Tarsus. Now referred to as the Goldman Study Collection, it has been reorganized and is housed in the material archives of the recently inaugurated Tarsus-

⁴New projects began in the course of the 1990's first at Kinet Höyük near İskenderun, Hatay and at Yumuktepe, Mersin, followed by the Amuq Valley Regional Projects leading to the excavations at Tell Atchana and Tell Tayinat. Other projects followed soon. Currently there are more than a dozen principal field projects active in the region.

Gözlükule Excavations Research Center accessible to the scholarly world. During this process Yasemin Bağcı (2016) was invited to study the Early Islamic period finds, previously filed and organized by Florence Day, to be reported upon in Bağcı's dissertation, directed by Joanita Vroom at Leiden University; see footnote 12 below.

The second phase (2007–2014) focused on investigating cultural deposits on the higher, eastern summit of this double peaked, elongated site located adjacent to Section A dug by Goldman's team. This location was selected in order to establish stratigraphic continuities and to gain a better understanding of the depositional context of earlier stratified finds. To find points of structural continuities between old and new trenches will also allow us to reassign new sea-level elevations to the Goldman publication depth readings, as the former zero point placed on the then highest location of the eastern summit and used for measuring all structural finds by the Goldman team is now lost. The new excavations started by the Boğaziçi University Tarsus-Gözlükule Excavation Project (henceforth TGK) are carried out in five contiguous 10 × 10 m trenches exposing deposits and structures in an area measuring 500 square meters on the eastern summit of the mound northeast of the partly filled in cavity left by former Section A (Fig. 10-1). While excavating Section A over the years, part of the hillside forming the eastern summit had been quarried away by the former team, resulting in a gaping cavity with steep scarps and disintegrating features on the southeastern side of the mound. Often mentioned as an alluring yet dangerous terrain, explored by several generations of alumni from nearby Tarsus American College, the deep trench was at one point filled back with rubble by the town municipality, leaving only the upper part of the scarp (ca. 4-5 m in height) curving along the northern edge of the cavity exposed. Scraping and drawing a section view of the strip that once was the top of the eastern scarp of Section A allowed a preview of what to expect digging down in this area (Özyar et al. 2011: 259, 262, fig. 6).

The TGK trenches were laid out in order to descend onto the remaining debris of a collapsed monumental Late Bronze IIA building partly revealed by the Goldman team (Fig. 10-2). The exposed foundation of this monumental structure had been partially dug away to reach earlier levels, and the remainder of it became prey to modern construction activities in the vicinity; thus, to date, no part of this building survives. The new trenches are oriented north-south and placed within a 1 kilometer square topographical grid draped onto the downtown of Ottoman/Early Republican Tarsus, which incidentally has the same diameter and thus seems to have retained roughly the contours of the fortified Medieval and

Roman town; for the segment over the mound see Özyar et al. 2010: 274, plan 1. If in the future there is interest in exploring locations beyond the mound, the grid facilitates the connection of trenches in different parts of downtown Tarsus within the same grid plan. The five 10×10 m trenches are C716 and C717, C706 and C707, and B797, the latter located next to the flagpole erected on the mound in the late 20th century.



Figure 10-1. TKG trenches next to the partly filled in cavity left of Goldman Section A, with remainder of eastern scarp exposed.

The topsoil of the mound in this area has been recently interfered with; the municipality leveled the presumably uneven ground of the summit to provide access for vehicles and allow for gatherings in front of the new flagpole. This leveling operation reduced the elevation of the unexcavated summit area from what it had been during the Goldman period and immediately exposed stratified medieval remains barely covered by seasonal vegetation. In the Goldman publications, the elevation of the Early Islamic period medieval levels, referred to as “Islamic” in the cross-section drawing A-AA through the excavated area of Section A, are between 2-4 m below their now lost zero-point (Goldmann 1956: plan

26).⁵ The section shows the medieval level, including Building I referred to by Goldman (1950: 25, plan 9) as a well-preserved Islamic building,⁶ clearly cutting into earlier debris reaching Late Bronze Age II levels as also explained by Goldman (1950: 24-25, plan 9). This major cut, juxtaposing medieval and Late Bronze Age levels in the eastern summit, is clearly visible in the new trenches of TKG as well, with the gray shaded area in the south marking the Late Bronze Age matrix of the mound (Fig. 10-2). Parts of this medieval habitation level terraced into the ancient



Figure 10-2. Location of LBA IIA monumental building (northern part hypothetical), and the TKG trenches. Plan by Göze Üner, partly adapted from Goldman 1956, plan 22.

mound were carefully taken apart and examined during excavations in the course of the new TKG expedition. This process revealed a structural continuity in the use of the area from the Late Antique to the Early Islamic period with an unsuspected yet plausible similarity in building techniques

⁵This section view by Theresa Goell is stitched together from multiple segmentary plan and section drawings.

⁶The location of a second Islamic building is indicated in the northeastern corner of Section B (1950: plan 6).

in contrast to a change in the functional use of the space.⁷ The presence of 8th–9th century CE finewares and objects imported from the Early Islamic world beyond the immediate region suggests that the structure was built for and inhabited by the Abbasid élite of Tarsus. Most of the TGK finds have comparanda among the Goldman period finds from the corresponding levels except for the series of medical/pharmaceutical/cosmetic bronze tools which are so far only attested in the TGK corpus. This seems to be particular to the circumstances of the inhabitants in the household revealed by TGK.

The first two excavation seasons (2007–2008) exposed the main phase of the medieval remains dating to the Early Islamic period; the next three (2009/2010/2012) peeled its layers and deconstructed the area down into the Late Antique strata. The following parts of the chapter introduce: (1) the medieval architectural remains, including a multi-roomed structure, its septic infrastructure with related cesspits and trash pits; (2) selected imported and local objects to illustrate the cultural orbit of the inhabitants of this building; (3) categories of plain and glazed pottery associated with this structure and aspects of local and/or regional production and consumption.

MEDIEVAL STRATIGRAPHY AND STRUCTURAL REMAINS⁸

The TGK excavations uncovered an Early Medieval level followed by partially preserved Late Medieval remains restricted to the northeastern segment of trench C717. The latter consisted of a paved area connected to a drainage channel sealing a disturbance and a trash pit dug into another disturbance, both dated by the presence of turquoise/blue glazed frit ware to the 12–13th centuries CE. The paving consisted of broken tiles, opus sectile fragments and irregular flat stones, one of which proved to be the fragment of a Late Antique tombstone dated to the 5th–6th centuries CE preserved in two joining segments reused upside down as paving material (Özyar et al. 2009).

⁷Goldman (1950 : 33) notes that “there is almost no evidence for the occupation of the hill from the fifth to the seventh centuries....if there were...they have become engulfed by the Islamic levels.” The new excavations were able to explore how they were engulfed or re-used.

⁸This section provided by Aslı Özyar and Elif Ünlü.

Architecture of the Main Occupational Phase

Early Medieval remains were preserved in all five excavated trenches (Fig. 10-3). Ceramics and small finds (see below) identify these as Abbasid, dating to the 8th–9th centuries CE. Architectural remains with associated infrastructure as well as trash pits define the occupation.

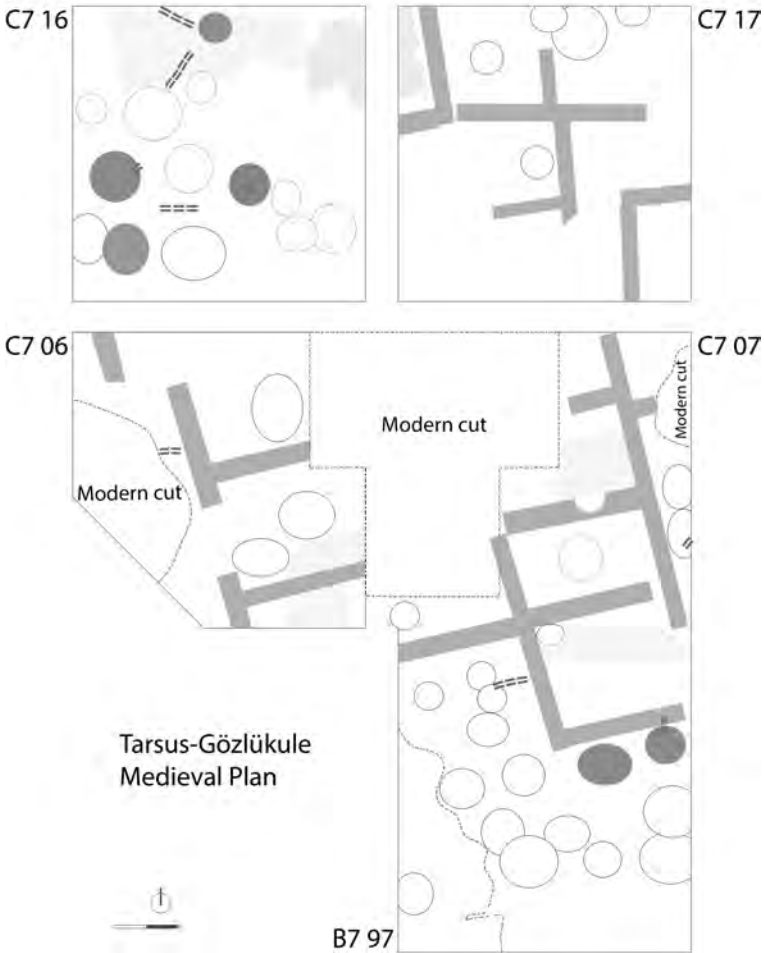


Figure 10-3. Location of structural and infrastructural remains in the medieval level. Trash pits are light, cesspits dark, dashed lines indicate piping/drainage. Adapted from architectural plans by Elif Ünlü.

Stratigraphic circumstances indicate that there are both earlier and later subphases of this level not discussed in this short summary. A multi-roomed building oriented NW-SE, comparable to Building I mentioned above (Goldman 1950: plan 9), extends over C706-C707 and B797 marking the main occupational phase. The preserved walls measure 13.5×13 m, suggesting a building of at least ca. 175 m^2 . The orientation of this structure follows the partially re-used foundations of a Late Antique building below this level (Fig. 10-4). The superstructure of the Abbasid

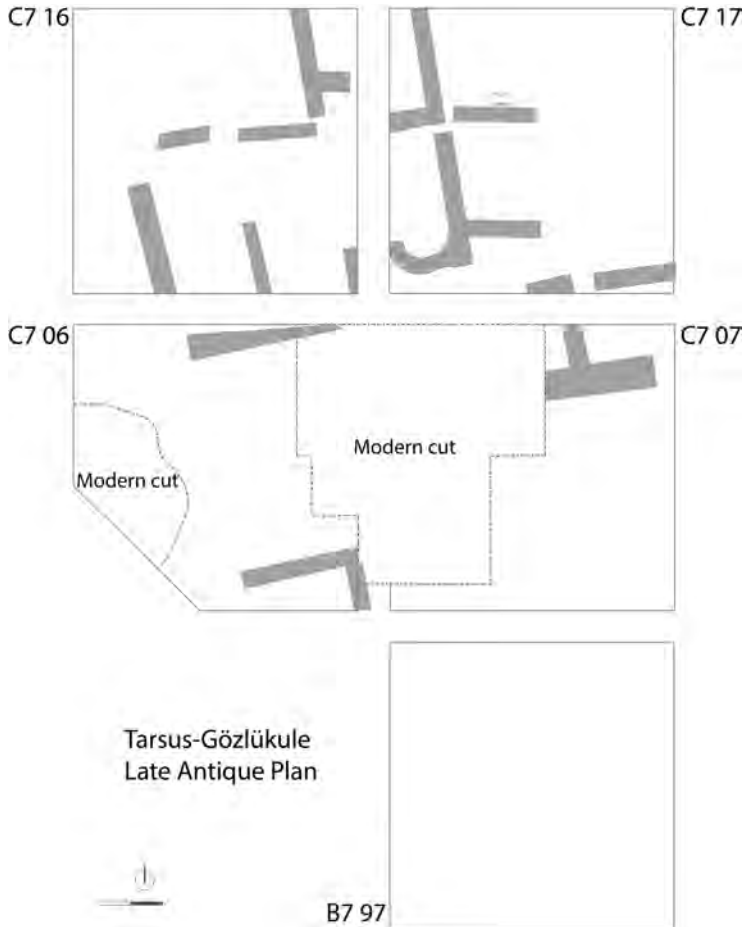


Figure 10-4. Plan of structures in the Late Antique level. Adapted from architectural plans by Elif Ünlü.

period building survives up to a maximum of two courses of stones above its foundations. Rubble mixed with stones, and ceramic and tile fragments filled and leveled foundation trenches of varying depth, apparently continuing local Late Antique building traditions. The significance of the east-west running wall (locus 5) in the center of C707, perhaps marked by the semi-circular niche (possibly a *mihrab* given its orientation towards the *qibla*), built into the northern side of its superstructure seems to have warranted the most solid foundation of all, with rubble filling a deeper cut trench than below other walls. In some of the rooms in trench C707 and C706, remains of clay plastered floors, shaded light grey on the plan (Fig. 10-3) were partially preserved. One of the bronze medical tools, a spoon-probe (no. 446; see Fig. 10-8, below), was found in C706 above the plastered floor, another probe (no. 258), was found in a hearth in a room to the south of the building, in trench B797. The ca. 1 m deep trash pit in the center of the room to the south of the niche (in C707) belongs to the above mentioned earlier phase of the Abbasid level.

A series of interconnected walls in trench C717 were laid in phases as indicated by the overlap in their foundation trenches, including a further room in the SE corner of the trench. None of these rooms or any of their walls connect to or align with the multi-roomed building further south. Their associated ceramic assemblage, however, dates these clearly to the Abbasid period. For example, four near complete cooking pots, one of the hallmarks of this period as explained below by Vokaer (see the Cooking Wares section and Figs. 10-13b-c), were found under two rubble piles of *in situ* architectural collapse associated with these rooms.

Floors and Infrastructure Indicating Water Management

In the northern part of the exposed area (trenches C716 and C717) a series of well-built floors can be distinguished; the best preserved and most solid one, shaded darker grey in Fig. 10-3, was a cement-like hardened, lime packed floor on a clay bedding extending into both trenches, covering a roughly rectangular area of approximately 13 m². The Late Antique foundations (Fig. 10-4), uncovered in C717 along the southeastern part of this floor, seem to have been re-used in the Early Islamic period. In the northeastern quadrant of C717 fragments of a tile paved floor (not shown on the plan) survived. On this floor was found a small, almost whole jar in buff ware (Özyar et al 2010: 281, fig. 11 left). Several large, water worn paving stones of a floor were found *in situ* and below architectural collapse rubble including a large fallen chunk of lime plaster in the northeastern quadrant of C716. These paving stones were

above a clay plastered floor which spread east over Abbasid period infrastructure consisting of waste water draining channels, indicated with broken lines in Fig. 10-3, connecting to a drainage pit with a domed superstructure made of several rows of tiles and flat stones (Özyar et al 2014: 177, fig. 2). A patch of a similarly clay plastered floor was also found underneath the firm, lime-plastered floor mentioned above. To its east, in the northwestern quadrant of C717, a lime-plastered channel leading into a well-like drainage pit at least 4 m deep (Özyar et al. 2011: 261, fig. 3) was lined at its top with 5-6 courses of stones above several layers of tiles and ceramic fragments. The variety (tile paved, stone paved, lime plastered, and clay plastered) and concentration of water resistant floors in this northern area connecting to drainage facilities suggests that a series of wet rooms were possibly once located here to the north of the multi-roomed structure.

A further type of infrastructure related to waste water management includes the cesspits (dark circles in Fig. 10-3) associated with the multi-roomed main architecture of this period. One of these was found connected to the southern wall of this building by means of a clay pipe through the foundation (Özyar et al. 2011: 258, fig. 3). Another three are located to the north of the building in C716; one was preserved intact with superstructure and pipe (Özyar et al. 2011: 261, fig. 2). These septic pits exhibit more or less uniform features in terms of construction; a round pit of ca. 1 m diameter and 1 m depth was dug in the ground leaving a ledge of ca. 0.25 m around the bottom upon which a domed structure was laid, consisting of several courses of undressed limestones. A clay pipe would have directed the wastewater into the domed pit.

Trash Pits for Waste Management

The large number of round trash pits along with the above mentioned cesspits, not far from the architectural structures, indicate open air spaces. Some of these cylindrical pits reached a depth of 2 m and contained bones and ceramic and glass fragments, as well as an assortment of discarded objects. These pits provide closed contexts, thus defining and illustrating the typical Abbasid assemblage. The range of plainware vessels, terracotta lamps, medical tools, pharmaceutical or cosmetic containers, etc. are often only known from museum collections with little information on their provenance or from excavations with less stratigraphic information recorded or preserved. Therefore, it is particularly helpful for the Abbasid period material culture that here they were found as an assemblage and in sound stratigraphy.

OBJECTS FROM THE MEDIEVAL LEVELS⁹

The assemblage of Medieval period small finds at Tarsus-Gözlükule between 2007 and 2014 points to a settlement that availed itself of a significant variety of objects both for everyday use and for privileged consumption. These objects can be related to a *koine* of material culture that arose in the early Abbasid period (c. 750-950 CE) from Iran to Egypt. A significant number of the finds in metal, glass, and stone is characterized by an apparent association with medical, pharmaceutical, and/or cosmetic applications. Along with the quantity and quality of the imported fine luster and blue-and-white wares, the tools and containers that stand out among the small finds suggest an élite occupation with a particular interest in the pursuit of wellness.

Glass

Glass easily dominates the medieval small finds of Tarsus-Gözlükule. Both the quantity and the variety of glass types are remarkable, as is the multitude of shards that belong to extremely thin-bodied vessels. Among the glass objects is one gaming piece of dark blue glass. In addition to monochrome glass in various shades of blue and green, there is also a significant quantity of clear and colorless glass, among which thin-bodied examples are highly noticeable. In terms of decoration, moulding, trailing, and luster painting (or staining) can be seen on numerous examples. Tarsus is known to have had at least one site where glass was produced in the Abbasid period—the Roman bath in the city center in which four medieval glassmaking kilns have been found (Adak-Adıbelli 2007)—making it likely that at least some of the glass found at Gözlükule was produced locally. Further research may help to distinguish the local glass from its imported counterparts and thus provide insight into the nature of sophisticated objects produced at Tarsus.

Several miniature bottles (Fig. 10-5a–b) were likely used as containers for valuable oils or other liquid preparations. These generally have a globular or prismatic (cubical) body and short neck that sometimes shows constrictions that may be decorative or functional. Similar bottles have been found and dated to the ninth or tenth centuries in Nishapur (Kröger 1995), Samarra (Lamm 1928), Tiberias (Lester 2003), and Fustat (Pinder-Wilson and Scanlon 1973), and were clearly distributed far and wide across the Abbasid empire. A nearly intact glass object made of fine light

⁹This section provided by Oya Pancaroğlu.

blue glass in the form of a cup with a rounded bottom and a long straight spout is likely to be a cupping instrument (Fig. 10-6a).¹⁰ Fragments belonging to an estimated 33 glass cupping instruments with straight spouts were identified in the cullet that formed the main cargo of the eleventh-century shipwreck at Serçe Limanı (Bass et al. 2009).



Figure 10-5. Miniature glass bottles
 a. No. 297 from trash pit below the main building phase in C707. b. No. 530 from a trash pit to the west of the main building in B797.

Among the decorated glass, luster painting (or staining; see Carboni 2001) stands out in particular. The decoration consists of either monochrome or polychrome luster on generally clear and colorless glass, although at least one shard is of dark blue glass. The most remarkable find

¹⁰Cupping instruments tend to be very similar to alembics, the main difference between the two having to do with the direction of their spouts, whether straight or curved. Alembic spouts generally point downwards when the cup is positioned on the cucurbit for the process of distillation, while the spout of a cupping instrument points upwards to facilitate the drawing of air from inside the cup when placed on a patient (Carboni 2001). For contemporaneous examples of cupping instruments with upward curving spouts (though identified as alembics) from Nishapur, see Kröger 1995.

in this category is a small bottle (Fig. 10-6b) (about 15 cm in height) reconstructed with only a few missing pieces. The nearly colorless bottle has a globular lower half and a cylindrical neck opening up to a funnel-shaped mouth. The luster decoration is concentrated especially around the lower half and is organized into horizontal bands. The uppermost band contains an Arabic inscription in Kufic style that has so far only been partially deciphered. Below the inscriptional band is a series of four medallions. The outlines of the medallions, like the rest of the decoration,

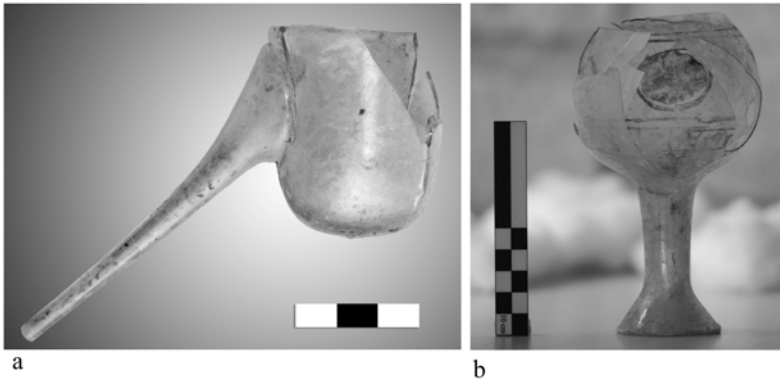


Figure 10-6. Glass objects: a. Glass cupping instrument (no. 529) from trash pit to the west of the main building in B797; b. Luster decorated glass bottle from a trash pit below the main building phase in C717.

are in a light brown or amber tone whereas the interior of the medallions is filled in with a silver tone. Both colors are probably the result of the application of the same silver (or silver and copper) compound with difference achieved by the length of time the paint was heated in a reducing condition (Brill 1970). The vague and amorphous appearance of the silver infills, as well as the degree of imprecision that generally characterizes the application of luster, suggest that the bottle was the work of an artist who was not highly experienced in the technique. This impression is reinforced when the bottle is compared to some of the more renowned examples of luster painted glass (with and without inscriptions), especially from Syria and Egypt between the eighth and the tenth centuries (Carboni 2001; Carboni and Whitehouse 2001). It is possible, therefore, that the Gözlükule bottle is an example of local production keeping up with trends in Syria and Egypt.

Bone

Bone was used extensively for everyday objects during the Abbasid period at Tarsus-Gözlükule. Although no object has been found intact, there are partial examples of two-sided combs, spoons, and handles (perhaps of knives or other tools). Others may be tentatively identified as pieces belonging to furniture or caskets either as part of a latticework construction or as surface applications. By far the most common bone object, however, is the ubiquitous spindle whorl, usually in the form of a small disc that is flat on one side and hemispherical on the other with a hole through the center. Typically the hemispherical side is polished and decorated with concentric circles and/or dot-in-circle motifs. The latter appears as surface decoration on other bone objects as well. These motifs and the whorls and other cylindrical objects were clearly produced by means of a lathe. Similar spindle whorls (sometimes tentatively identified as buttons; for the difference see Ayalon 2005: 22) have been found at medieval sites all across the Islamic and Byzantine lands.



Figure 10-7. Head of a doll (no. 961) from fill in the northwest corner of C716.

Among the bone objects is a small carving (about 3 cm in height) of a head (Fig. 10-7) that probably belonged to a doll made of composite materials. The face is finely carved with large almond-shaped eyes above a small nose and dimpled mouth. These features are in line with the dominant figural style of the Abbasid period as attested especially on ceramics. Such doll heads as well as entire dolls fashioned out of bone have been found at numerous sites in Egypt, Palestine, and Syria (Scanlon 1968; Rahmani 1981; Ayalon 2005; Rodziewicz 2007, 2012; and Shatil 2016) as well as in the earlier excavations at Tarsus-Gözlükule directed by Hetty Goldman (Goldman 1935).

Metalwork

Eight medieval bronze tools found at Tarsus-Gözlükule may be identified as medical probes. They are in the form of a thin cylindrical rod of cast bronze generally measuring between 10 and 15 cm. They have polished surfaces and rounded tips at one or both ends. A few of the tools have fine decorative elements in the form of prismatic or spherical nodes that also served as grips. For the most part, these tools appear to have been designed for use as probes or sounds in a variety of medical procedures such as the examination of abscesses, application of ointments, and cauterization. They may thus be regarded as multi-functional tools, useful as much for the specialist as for the non-specialist. Most of them were designed as double-ended instruments. The finest example from Tarsus-Gözlükule is a spoon-probe (Fig. 10-8). The spoon end could have been



Figure 10-8. Bronze medical/pharmaceutical/cosmetic tools. Top to bottom: cosmetic tool, no. 699 (from C717), probe, no. 258 (from B797), spoon probe, no. 446 (from C706).

used not only for measuring or dispensing medicaments but also for curettage while the plain rounded end could be used for simple probing or cauterization. A short (7 cm) but delicately decorated little bronze tool is more likely to have been an instrument used in preparing small quantities of medical or cosmetic substances. Similar bronze tools have been attested across the medieval Islamic geographical range from Central Asia to Spain (Eger forthcoming) and can be considered the medieval continuation and expansion of the Roman tradition of medical instruments.

Stone

Objects in two types of stone, steatite and alabaster, stand out in particular. Steatite fragments probably belong to incense burners, of which intact examples have been excavated especially in Iran, at Nishapur, Susa, and Siraf as well as in Syria, Palestine, and Egypt (Scanlon 1968; Le Maguer 2011). Although the Gözlükule fragments are relatively small, they can be identified as handles or corners of incense burners that were typically cubic or round in form with either deep or shallow carving. The incense would be placed in the central cavity and heated to release fragrant scents. Steatite was a particularly suitable material for an incense burner because its mineral structure allows heat to be distributed evenly and retained for a fairly long time. As a soft stone, steatite is also easy to carve but hardens with use.

Alabaster, a term used to refer both to calcite and gypsum, appears to have been used for making lathe-turned shallow cylindrical containers with lids. Numerous fragments belonging to such containers were found in the earlier and current excavations at Gözlükule. Unlike all other object types for which parallels can be found in various other parts of the Abbasid empire, the alabaster containers seem to be particular to Tarsus, although it is likely that they were sourced from Egypt, not unlike the alabastrons of antiquity. Despite the difference in form to alabastrons, these containers were also probably used for the storage of cosmetic and/or aromatic substances.

Lamps

Of the near complete oil lamps found at Gözlükule during the TKG campaigns, thirteen may be dated between the ninth and the tenth centuries. Of these, nine are mould-made and four are wheelmade. The mould-made lamps have the ubiquitous almond shape with a round filling hole at top center and a wick hole at the pointed end forming the nozzle. A

stub-like handle is located at the round end. The decoration is mostly confined to the top and generally consists of straight or wavy lines, dashes, and dots arranged in a configuration extending from either side of the handle toward the nozzle. This decorative arrangement is also encountered on mould-made lamps found in the Goldman excavations as well as at Mersin-Yumuktepe (Day 1942). Among the numerous examples found in the Goldman excavations are also a small number of glazed ones, with at least one bearing an Arabic inscription (Day 1941). On the finest example (Fig. 10-9a-b) found in the TGK campaigns (no. 559), the crisp decoration resembles two palm fronds or stylized cypress trees gently tapering towards the nozzle. Among the wheelmade lamps a nearly complete one is



Figure 10-9. Abbasid clay lamps:

a-b. Mold-made, (no. 559) from trash pit to the west of the main building in B797;
 c-d. Wheelmade green-glazed, (no. 1641) from trash pit between two cesspits, to the north of the main building towards the center of C716.

a green-glazed example (Fig. 10-9c-d) (no. 1641) consisting of a saucer-shaped base with a roughly hemispherical upper part forming the receptacle for oil. This example has two holes, a larger one in the center for filling and a smaller one to the side for the wick, and a loop handle. Comparable wheelmade lamps have been found in Antioch (Stillwell 1941) and in Fustat (Kubiak 1970). The predominance of mould-made almond-shaped lamps at Gözlükule is in keeping with the general spectrum of oil lamps found in Syria, Palestine, and Egypt.

THE POTTERY FROM THE MEDIEVAL LEVELS¹¹

The material presented here is a selection of the most frequent types found at Tarsus-Gözlükule and of their most representative comparisons. It mainly comes from trash pits.

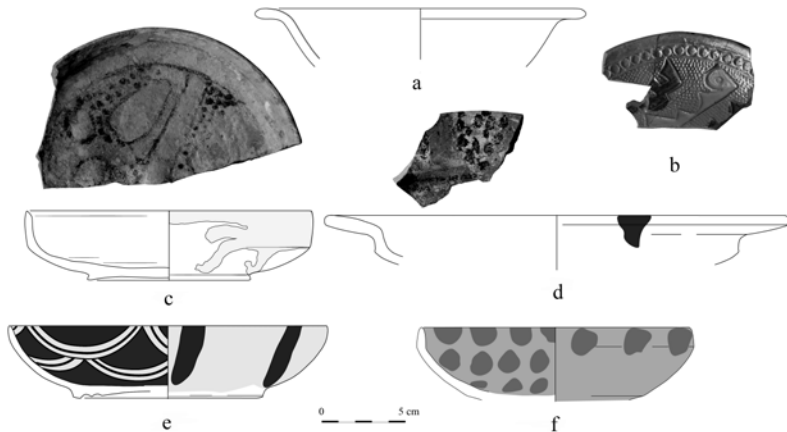


Figure 10-10. Abbasid Glazed Ware from Tarsus Gözlükule (drawing A. Vokaer, CAD A. Stoll).

¹¹This section provided by Agnès Vokaer.

Glazed Wares

Glazed wares are illustrated by a rich corpus, characteristic of the Samarra Horizon (9th–10th centuries CE). It consists of White Opaque Wares (originating from Iraq or imitating it) (Fig. 10-10a), Polychrome Splashed Wares, Monochrome Glazed Wares, Glazed Relief Wares (Fig. 10-10b), Polychrome Painted Glazed Wares (Fig. 10-10c-f and Fig. 10-11a-b) and a few Lustrewares (Fig. 10-11c).¹² They can be compared to the Abbasid glazed wares from Syria (e.g. Antioch: Waagé 1948; Raqqa and its surroundings: Miglus 1999; François and Shaddoud 2013; Qasr al-Hayr al-Sharqi: Grabar et al. 1978), from Iraq (e.g. Samarra: Sarre 1925) or from Iran (e.g. Susa: Kervran 1977, 1984). The Polychrome Painted Glazed Wares, which are the most abundant, could have been regionally or locally produced.

Buff Wares

The domestic buff wares represent the majority of the assemblage and found good comparisons on most of the Abbasid sites in Syria such as Hadir (Rousset 2012), Raqqa and surroundings (Miglus 1999; François and Shaddoud 2013), and Rahba Mayyadin (Rousset 1996). Noteworthy are two types of deep bowls (Fig. 10-11.c-d), *Kerbschnitt* decorated bowls (Fig. 10-12a), basins with angular or elongated rims (Fig. 10-12.b-c), conical lids (Fig. 10-12f), the two latest forms continuing the Late Roman tradition, and the so-called “chamber pots,” which were also produced in a glazed version (Fig. 10-12d). Typical Abbasid cream-coloured jugs and pitchers with carinated body are also common (Fig. 10-12e). The thinnest versions can also wear a moulded decoration or sometimes a black painted or a sparsely glazed decoration. One type of two-handled jars appears to be frequent at Tarsus but does not find much comparison elsewhere. It has a triangular or concave rim and a ribbed neck (Fig. 10-13a). The best parallel for this type is found in Antioch, in the medieval (10th to 12th centuries CE) level of sector 19-M (Lassus 1972: Fig. 11-35).

¹²Well-preserved exemplars of these categories were found by H. Goldman; see Day 1941. The whole Abbasid corpus of Goldman’s excavation is the subject of a Ph.D. thesis: Yasemin Bağcı, in preparation, *Coloured ceramics of the caliphs: the Abbasid pottery finds of the 1935-1948 Gözlükule excavations in Tarsus*, Faculty of Archaeology, Leiden University. See Bağcı 2016.

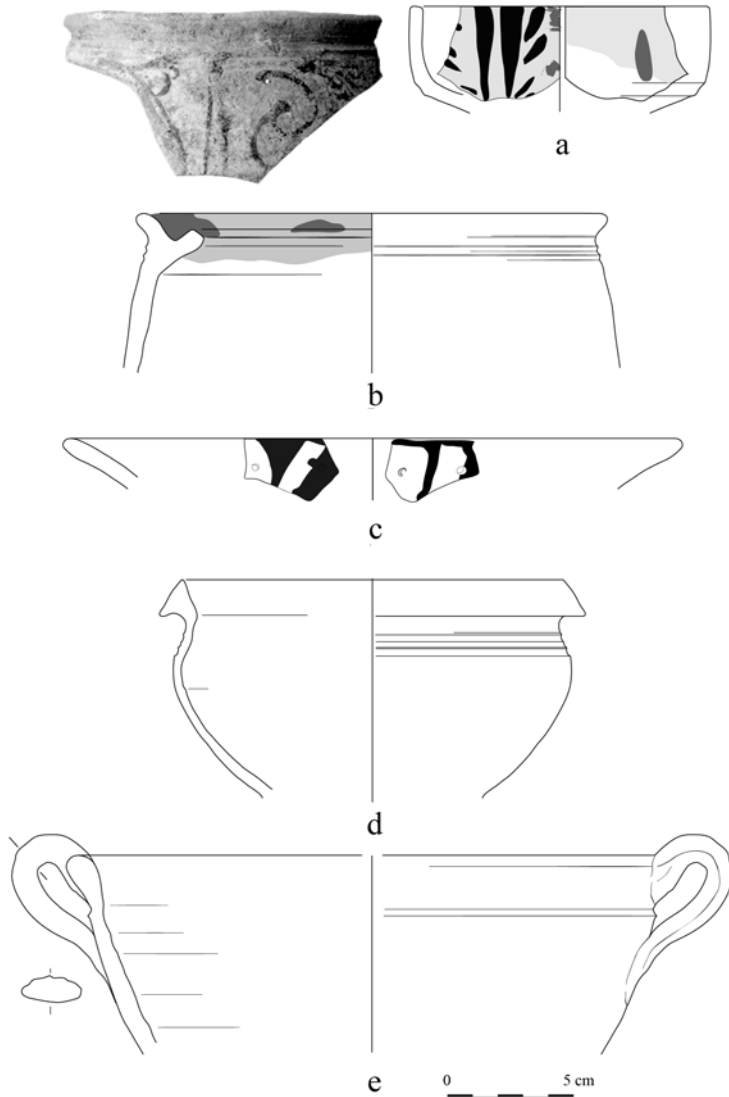


Figure 10-11. Abbasid Glazed Ware (a-c) and Buff Ware (d-e) from Tarsus Gözlükule (drawing A. Vokaer, CAD A. Stoll).

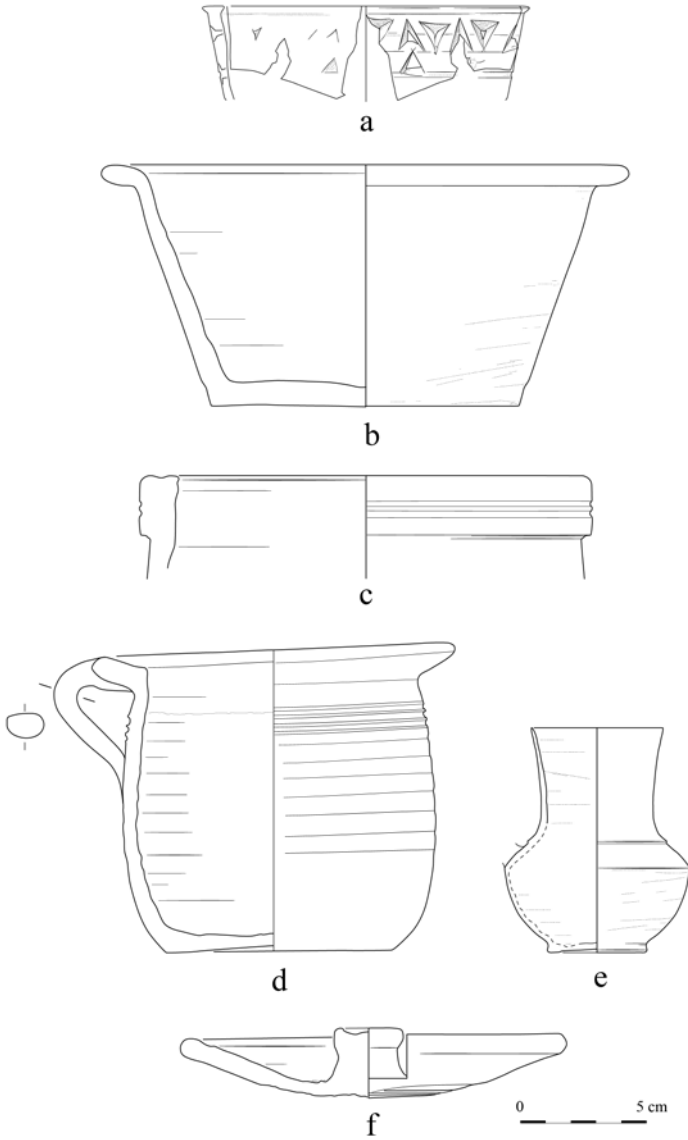


Figure 10-12. Abbasid Buff Ware from Tarsus Gözlükule (drawing A. Vokaer, CAD A. Stoll).

Cooking Wares

The cooking ware from Tarsus-Gözlükule mainly belongs to the well-known Syrian *Brittle Ware* tradition. It is primarily represented by the neckless cooking pot, a form that appears at the end of the 8th century and gradually replaces the high-necked cooking pots that were used during the Late Roman and Umayyad periods. It has been already noted that the neckless Abbasid cooking pot imitates the softstone industry that became popular in the Bilad al-Sham at the beginning of the Early Islamic period (Vroom 2009: 246; Vokaer 2010: 120). The exemplars from Tarsus provide interesting evidence of a similar shape produced in two different wares. The first category is a Brittle Ware vessel with vertical walls, a rounded base with low carination, and small triangular handles joined by a horizontal thick ridge that runs along the whole vessel (as for the stone exemplars) (Fig. 10-13b). This type gradually evolves into a variant that is more rounded (Fig. 10-14a). The second category, less frequent, consists of dark carefully burnished vessels (Fig. 10-13c). Morphologically, these cooking pots also have straight walls and a carinated, curved base. They bear two to four handles, and some have geometric decorations, which can be incised after firing in order to further mimic the stone carving. The clay fabric (crushed calcite, with quartz and sometimes volcanic inclusions) differs from that of the Brittle Ware. Its precise origin needs to be determined by further petrographic analyses. It could be local, but dark burnished softstone imitations are also known, among others, at Hisn al-Tinat (Eger 2010: Fig. 10-f), Hadir (Rousset 2012: 76, Fig. 3), Rahba-Mayyadine (Rousset 1996: pl. 57-570 to 572) or Ramla (Arnon 2007: Fig. 1-11).

The neckless Brittle Ware pot is characteristic of the Abbasid period and is found at many sites from inner Syria to the Persian Gulf (see map in Vokaer 2011: Fig. 108-2). Previous fabric analyses demonstrated that it was manufactured and distributed in Syria by three production centres: “Workshop” 1, from the area of Antioch, “Workshop” 4, located in the region of Apamea, and “Workshop” 6, originating from northwestern Syria (Schneider et al. 2007; Vokaer 2011). At Tarsus, analysis indicated that the Brittle Ware was imported from “Workshop” 1, but it also revealed two unknown production centres (Groups TGK 1 and 6). Interestingly, the Group TGK 6 consists of/combines Abbasid neckless pots as well as Late Roman cooking pots: a continuity in the production that points toward a local or regional origin.

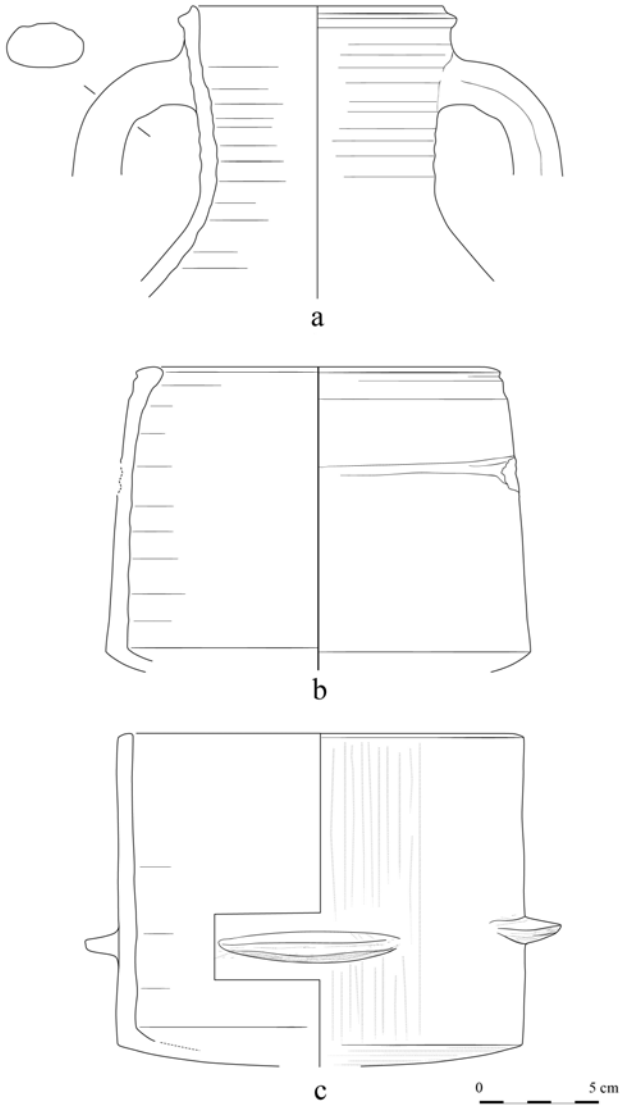


Figure 10-13. a. Abbasid Buff Ware; b-c. Cooking Ware from Tarsus Gözlükule (drawing A. Vokaer, CAD A. Stoll).

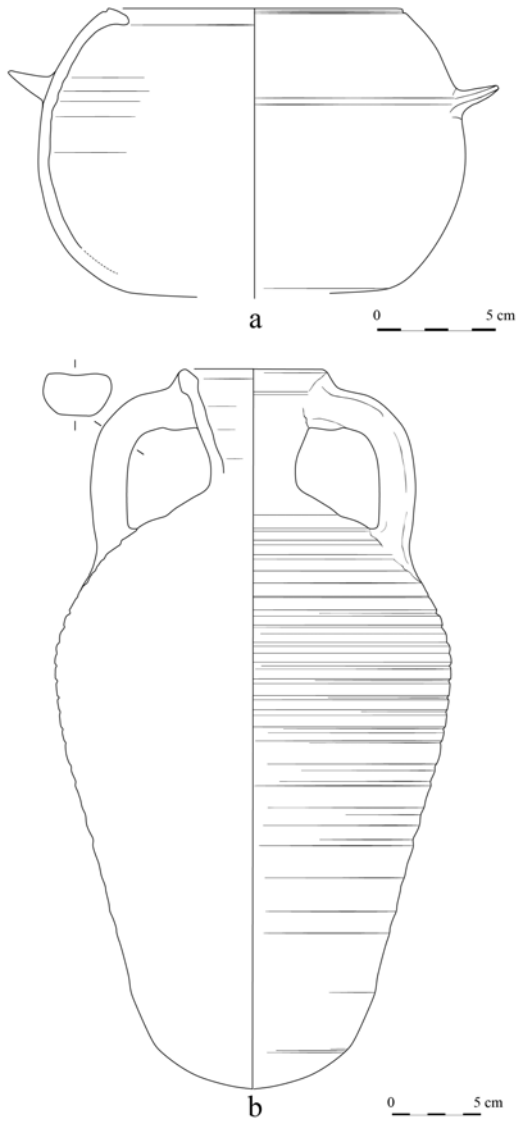


Figure 10-14. a. Abbasid Cooking Ware; b. Amphora from Tarsus Gözlükule (drawing A. Vokaer, CAD A. Stoll).

Amphorae

One should note the striking scarcity of amphorae in the Tarsus assemblage; a single but almost complete amphora was retrieved in a pit together with two-handled jars (Fig. 10-14b). It originates from the eastern Crimea and finds good comparisons for instance at Phanagoria (Chkhaidze 2012: pl. 85, Type XII) or in the 9th–10th centuries CE Bozburun shipwreck (Hocker et al. 1998: 5).

Synthesis

The ceramics from Tarsus-Gözlükule (glazed wares, buff wares, and cooking wares) belong unsurprisingly to the repertoire of the large Abbasid *koine*. Imports consist of a few glazed wares from Iraq and Brittle Ware from the region of Antioch. The same type of cooking ware was also produced by other workshops of probably local or regional origin. Most of the plain wares in buff calcareous clay also fit within this large cultural Abbasid tradition, although some shapes (e.g. the two-handled jar) seem to express a more regional *facies* with a connection to Antioch. Finally, the presence of a Black Sea amphora is worth noting, providing evidence for the persistence of commercial networks connecting to that area.

CONCLUSION

Ongoing research on the medieval levels of the Gözlükule mound has so far shed significant light on the material culture of especially the Abbasid-period settlement (8th–10th centuries). The various small finds point to the sophisticated consuming habits of a community that had access to goods which measure up to those of major urban centers from Egypt and Syria to Iraq and Iran. The ceramic assemblage, on the other hand, displays a somewhat tighter link to Syria suggesting continuities in cooking and storage practices along regional lines. Despite the partial preservation of architectural features in the excavated area, the significant presence of infrastructure related to water as well as numerous trash pits promises to yield more information about the nature of the occupation of the multi-room structure and its phases. Ultimately, by correlating the findings of the current project with the hitherto unpublished findings of the Goldman project, it is expected that further study of the medieval levels of Gözlükule will form a benchmark in the archaeological knowledge about urban settlements in the Abbasid period.

ACKNOWLEDGEMENTS

The T GK team would like to thank: The Turkish Ministry of Culture and Tourism; The General Directorate for Cultural Heritage and Monuments; Boğaziçi University; Boğaziçi University Research Projects Nr. 00HB901, 00R104, 02R101, 07B901, 07R101, 5103, 8254; Boğaziçi University Kandilli Observatory and Earthquake Research Institute; Boğaziçi University Foundation M. J. Mellink Fund for T GK; the Tarsus Museum of Archaeology; and the Town of Tarsus.

REFERENCES CITED

- Adak-Adıbelli, Işık. 2007. Tarsus Roma Hamamı Kazısı. In *15. Müze Çalışmaları ve Kurtarma Kazıları Sempozyumu (2006)*, 25-40. Ankara: T.C. Kültür ve Turizm Bakanlığı.
- Arnon, Yael. 2007. Excavation in Marcus Street, Ramla: Pottery, Oil Lamps and Carved Stone Vessels. *Contract Archaeology Report II*: 38-99.
- Ayalon, Etan. 2005. *The Assemblage of Bone and Ivory Artifacts from Caesarea Maritima, Israel, 1st-13th Centuries CE*. Oxford: Archaeopress.
- Bağcı, Yasemin. 2016. A New Look on Medieval Ceramics from the Old Gözlükule Excavations: A Preliminary Presentation. In *10th International Congress on Medieval Pottery in the Mediterranean. Silves & Mertola, 22-27 October 2012*, M.J. Gonçalves and S. Gómez Martínez, eds., 627-636. Silves: Edição Câmara Municipal de Silves/Campo Arqueológico de Mértola
- Bass, George F., Robert H. Brill, Berta Lledo, and Sheila D. Matthews. 2009. *Serçe Limanı, vol. II: The Glass of An Eleventh-Century Shipwreck*. College Station: Texas A&M University Press.
- Brill, R.H. 1970. Chemical Studies of Islamic Luster Glass. In *Scientific Methods in Medieval Archaeology*, R. Berger, ed., 351-377. Berkeley: University of California Press.
- Carboni, Stefano. 2001. *Glass from Islamic Lands: The al-Sabah Collection, Kuwait National Museum*. New York: Thames & Hudson.
- Carboni, Stefano and David Whitehouse. 2001. *Glass of the Sultans*. New York: Metropolitan Museum of Art.

- Chkhaidze, Viktor. 2012. *Phanagoria in the 6th-10th Centuries*. Moscow: [need publisher].
- Day, Florence E. 1941. The Islamic Finds at Tarsus. *Asia* 41: 143-148.
- Day, F.E. 1942. Early Islamic and Christian Lamps. *Berytus* 8: 1-17.
- Eger, A. Asa. 2010. Hisn al-Tinat on the Islamic-Byzantine Frontier: Synthesis and the 2005–2008 Survey and Excavation on the Cilician Plain (Turkey). *Bulletin of the American Schools of Oriental Research* 357: 49-76.
- Eger, Asa. Forthcoming. Bronze Surgical Instruments from Tüpraş Field and the Islamic–Byzantine Medical Trade. In *Questions, Approaches, and Dialogues in Eastern Mediterranean Archaeology: Studies in Honor of Marie-Henriette and Charles Gates*, E. Kozal, M. Akar, Y. Heffron, eds., 633-658. Münster: Ugarit-Verlag.
- François, Véronique and Ibrahim Shaddoud. 2013. Nouvel atelier de potier d'époque abbasside au sud de Tell Abou Ali à Raqqa. *al-Rafidan* 35: 21-81.
- Goldman, Hetty. 1935. Preliminary Expedition to Cilicia, 1934, and Excavations at Gözlü Kule, Tarsus, 1935. *American Journal of Archaeology* 39: 526-549.
- ., ed. 1950. *Excavations at Gözlü Kule, Tarsus*. Contributors: D.H. Cox, H. Goldman, V. Grace, F.F. Jones, and A.E. Raubitschek. Princeton: Princeton University Press.
- .. 1956. *Excavations at Gözlü Kule, Tarsus. From the Neolithic through the Bronze Age*. With chapters by M.J. Mellink and I.J. Gelb and an Appendix by F.R. Matson. Princeton: Princeton University Press.
- ., ed. 1963. *Excavations at Gözlü Kule, Tarsus*. Vol. III: The Iron Age. Contributors: H. Goldman, G.A.F. Hanfmann, and Edith Porada. Princeton: Princeton University Press.
- Grabar, Oleg, Renata Holod, James Knustad, and William Trousdale. 1978. *City in the Desert. Qasr al-Hayr East*. Cambridge, MA: Harvard University Press.
- Hocker, Frederick M., Sara W. Yamini, and George O. Yamini. 1998. Bozburun Byzantine Shipwreck Excavation: The final Campaign 1998. *The INA Quarterly* 25.4: 3-13.
- Kervran, Monique. 1977. Les niveaux islamiques du secteur oriental du tépé de l'Apadana II. Le matériel céramique. *Cahier de la Délégation Archéologique Française en Iran* 7: 75-162.
- .. 1984. Le matériel archéologique. *Cahier de la Délégation Archéologique Française en Iran* 14: 52-93.
- Kröger, Jens. 1995. *Nishapur: Glass of the Early Islamic Period*. New York: Metropolitan Museum of Art.

- Kubiak, Wladyslaw B. 1970. Medieval Ceramic Oil Lamps from Fustāt. *Ars Orientalis* 8: 1-18.
- Lamm, Carl Johan. 1928. *Das Glas von Samarra*. Berlin: D. Reimer.
- Lassus, Jean. 1972. *Les portiques d'Antioche (Antioch-on-the-Orontes, V)*. Princeton: Princeton University Press.
- Le Maguer, Sterenn. 2011. Typology of Incense-burners of the Islamic Period. *Proceedings of the Seminar for Arabian Studies* 41: 173-186.
- Lester, Ayala. 2003. Glass Bottles and Vials from Tiberias. *Annales du 15e Congrès de l'Association Internationale pour l'Histoire du Verre (2001)*, 158-164. Nottingham: Association Internationale pour l'Histoire du Verre.
- Miglus, Peter A., ed. 1999. *Ar-Raqqa I. Die Frühislamische Keramik von Tall Aswad*. Mainz am Rhein: P. von Zabern.
- Özyar, Aslı, Elif Ünlü, Türkan Pilavcı, Çiğdem Külekçiöğlü, Serdar Yalçın, Steven Karacic, Ali Güldüren, and Wesley Bennet. 2014. Tarsus-Gözlükule 2012 Yılı Çalışmaları. *Kazı Sonuçları Toplantısı* 35.2: 170-181.
- Özyar, Aslı, Elif Ünlü, Steven Karacic, Catherine Person, Türkan Pilavcı, and Serdar Yalçın. 2011. Tarsus-Gözlükule 2009 Yılı Çalışmaları. *Kazı Sonuçları Toplantısı* 32.3: 251-262.
- Özyar, Aslı, Elif Ünlü, Gundela Kaschau, Catherine Person, and Sevinç Duvarcı. 2010. Tarsus-Gözlükule 2009 Yılı Çalışmaları. *Kazı Sonuçları Toplantısı* 31.1: 265-284.
- Özyar, Aslı, Günhan Danışman, Elif Ünlü, and Emre Kuruçayırılı. 2009. Tarsus-Gözlükule 2007 Yılı Çalışmaları. *Kazı Sonuçları Toplantısı* 30.1: 47-60.
- Pinder-Wilson, R.H. and George T. Scanlon. 1973. Glass Finds from Fustat: 1964-71. *Journal of Glass Studies* 15: 12-30.
- Rahmani, L.Y. 1981. Finds from a Sixth to Seventh Centuries Site Near Gaza: I. The Toys. *Israel Exploration Journal* 31: 72-80.
- Rodziewicz, Elzbieta. 2007. *Bone and Ivory Carvings from Alexandria: French Excavations, 1992-2004*. Cairo: Institut français d'archéologie orientale.
- . 2012. *Fustat I. Bone Carvings from Fustat–Istabl 'Antar*. Cairo: Institut français d'archéologie orientale.
- Rousset, Marie-Odile. 1996. *Contribution à l'étude de la céramique islamique: analyse du matériel archéologique de Rahba-Mayadin (Syrie, vallée de l'Euphrate)*. Unpublished doctoral dissertation, University of Lumière Lyon 2.

- . 2012. *Al-Hadir. Etude archéologique d'un hameau de Qinnasrin (Syrie du Nord, VIIe-XIIe siècles). Qinnasrin I*. Lyon: Méditerranée et la Moyen-Orient.
- Sarre, Friedrich. 1925. *Die Keramik von Samarra*. Berlin: Reimer.
- Scanlon, George T. 1968. Ancillary Dating Materials from Fustat. *Ars Orientalis* 7: 1-17.
- Schneider, Gerwulf, Agnès Vokaer, Karin Bartl, and Malgorzata Daszkiewicz. 2007. Some New Results of Archaeometric Analysis of Brittle Wares. In *LRCW2. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and archaeometry*, M. Bonifay and J.-C. Trégliat, eds., 715-730. Oxford: Archaeopress.
- Shatil, Ariel. 2016. Bone Figurines of the Early Islamic Period: The So Called "Coptic Dolls" from Palestine and Egypt. In *Close to the Bone: Current Studies in Bone Technologies*, S. Vitezović, ed., 296-314. Belgrade: Institute of Archaeology.
- Stillwell, Richard, ed. 1941. *Antioch-on-the-Orontes III: The Excavations, 1937-1939*. Princeton: Princeton University Press.
- Vokaer, Agnès. 2010. Cooking in a Perfect Pot. Shapes, Fabric and Function of Cooking Ware in Late Antique Syria. In *LRCW3. Late Roman Coarse Wares, Cooking Wares and Amphorae in the Mediterranean. Archaeology and Archaeometry. Comparison Between Western and Eastern Mediterranean*, S. Menchelli, S. Santoro, M. Pasquinucci, and G. Guiducci, eds., 115-129. Oxford: Archaeopress.
- . 2011. *La Brittle Ware en Syrie. Production et diffusion d'une céramique culinaire de l'époque hellénistique à l'époque omeyyade*. Brussels: Académie royale de Belgique.
- Vroom, Joanita. 2009. Medieval Ceramics and the Archaeology of Consumption in Eastern Anatolia. In *Archaeology of the Countryside in Medieval Anatolia*, T. Vorderstrasse and J. Roodenberg, eds., 235-258. Leiden: Nederlands Instituut voor het Nabije Oosten.
- Waagé, Frederik. 1948. *Hellenistic and Roman Tableware of North Syria, Antioch-on-the-Orontes IV, 1, Ceramics and Islamic Coins*. Princeton: Princeton University Press.