

Tall Zirā'a

THE GADARA REGION PROJECT (2001-2011)

Dieter Vieweger | Jutta Häser (eds.)

6 Hellenistic to Umayyad Period





German Protestant Institute of Archaeology
(GPIA)



Biblical Archaeological Institute Wuppertal
(BAI)



Tall Zirā'a

The Gadara Region Project (2001-2011)

Final Report

Volume 6

Hellenistic to Umayyad Period

(Strata 8-3)

Ceramic, Glass and Metal Finds

Frauke Kenkel and Stefanie Hoss

Editors of the Tall Zirā'a Final Reports

Dieter Vieweger and Jutta Häser



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LIST OF ABBREVIATIONS

Abbreviated Journals and Series

AA	Archäologischer Anzeiger	IAA	Israel Antiquity Authority
AAJ	Annual of the Department of Antiquities	JGS	Journal of Glass Studies
ADPV	Abhandlungen des Deutschen Palästina-Vereins	JRA	Journal of Roman Archaeology
AM	Athener Mitteilungen	KölnMusB	Kölner Museums-Bulletin
BAH	Bibliothèque archéologique and historique	MedA	Mediterranean Archaeology
BaM	Baghdader Mitteilungen	OrA	Orient-Archäologie
BarIntSer	British Archaeological Reports. International Series	QDAP	The Quarterly of the Department of Antiquities in Palestine
BCH	Bulletin de correspondance hellénique	PF	Pergamenische Forschungen
BIFAO	Bulletin de l'Institut français d'archéologie orientale	REA	Revue des études anciennes
DaM	Damaszener Mitteilungen	ReiCretActa	Rei Cretariae Romanae Fautorum acta
DOP	Dumbarton Oaks Papers	StBiFranc	Studium biblicum Franciscanum. Liber Annuus
EtTrav	Études et travaux	TRAC	Theoretical Roman Archaeology Conference
FiE	Forschungen in Ephesos	UPA	Universitätsforschungen zur Prähistorischen Archäologie
GlasBeograd	Glasnik. Srpsko arheološko društvo (Journal of the Serbian Archaeological Society)	ZPE	Zeitschrift für Papyrologie and Epigraphik

General Abbreviations

c.	circa	Fig./Figs.	figure/figures
cf.	confer	max.	maximum
Chap./Chaps.	chapter/chapters	MNE	Maximum Number of Examples
Diss.	Dissertation	no./nos.	number/numbers
ed./eds.	editor/editors	Pl./Pls.	plate/plates
e.g.	example given	Tab.	table
est.	estimated	TZ	Tall Zirā'a
etc.	et cetera		

Legend for the Abbreviations used in the catalogues

D	Diameter	L	Length
g	Gram	Th	Thickness
H	Height	W	Width

Abbreviations for ware groups used by F. Kenkel in Chap. 1.

ESA	Eastern Sigillata A	Cl Bu2Br-f	Classic Buff to Brown-fine
ESB	Eastern Sigillata B	Cl Bu2Br-amph	Classic Buff to Brown-amphora
ESC	Eastern Sigillata C		
ESD	Eastern Sigillata D	Cl Bu2Br-soft	Classic Buff to Brown-soft
ARS	African Red Slip Ware	Cl Chal Bu2Br	Classic Chalk Buff to Brown
CRS	Cypriot Red Slip Ware	Cl Buff	Classic Buff
LRC	Late Roman C Ware	Cl Buff-hard	Classic Buff-hard
Cl Amph-rhod	Classic Amphora – Rhodos	Cl BS WP	Classic Brown/Black Slipped White Painted
Cl Amph-kos	Classic Amphora – Kos		
Cl Bu2Br-relief	Classic Buff to Brown – Reliefbecher	Cl BP	Classic Buff to Pink
Cl Bu2Br-attic	Classic Buff to Brown – Attic	Cl Bu2Red-grog	Classic Buff to Red-grog
Cl Bu2Br-attic-Ws	Classic Buff to Brown – Attic-Westslope	Cl Bu2Red-grog-c	Classic Buff to Red-grog-coarse
Cl Bu2Br-Ws-style	Classic Buff to Brown – West slope-style	Cl Red2Br-mica	Classic Red to Brown-mica
Cl Grey	Classic Grey	Cl Red2Br-grey core	Classic Red to Brown-grey core
Cl Grey-sl	Classic Grey-slipped	Cl Red2Br-grey core-hard	Classic Red to Brown-grey core-hard
Cl Grey-mld	Classic Grey-moulded	Cl Chal Red	Classic Chalk Red
Cl Grey-isl	Classic Grey-Islamic	Cl Chal Red-c	Classic Chalk Red-coarse
Cl Grey-ptd	Classic Grey-painted	Cl Red-bu2br core	Classic Red-buff to brown core
Cl Bu2Grn	Classic Buff to Green	Cl Red BuSl	Classic Red Buff Slip
Cl Bu2Grn-sl	Classic Buff to Green-slipped	Cl Red CP 1	Classic Red Cooking Pot 1
Cl Bu2Grn-dl	Classic Buff to Green-double layer	Cl Red CP 2	Classic Red Cooking Pot 2
		Cl Red CP 3	Classic Red Cooking Pot 3
Cl Bu2Grn-ptd	Classic Buff to Green-painted	Cl Red CP 4	Classic Red Cooking Pot 4
Cl Bu2Br-f-sl	Classic Buff to Brown-fine-slipped	Cl Red CP-gal	Classic Red Cooking Pot-Galilean

Cl Coarse Bu2Br 1	Classic Coarse Buff to Brown 1	Cl Coarse Red2Br 2	Classic Coarse Red to Brown 2
Cl Coarse Bu2Br 2	Classic Coarse Buff to Brown 2	Cl Coarse Red2Br 3	Classic Coarse Red to Brown 3
Cl Coarse Bu2Br 3	Classic Coarse Buff to Brown 3	Cl Coarse Red2Br 4	Classic Coarse Red to Brown 4
Cl Coarse Bu2Br HM	Classic Coarse Buff to Brown Handmade	Cl Coarse Red2Br-ch temp	Classic Coarse Red to Brown-chaff tempered
Cl Coarse Red2Br 1	Classic Coarse Red to Brown 1		

PREFACE

Dieter Vieweger/Jutta Häser



Fig. 0.1 Tall Zirā'a. View from west to east. Photograph taken in 2011 (Source: APAAME, David Kennedy).

When the German engineer G. Schumacher explored Transjordan in 1885, Tall Zirā'a was among his discoveries¹. He was the first European since the time of the Crusaders to enter the region. However, after thousands of years of prosperity, the valley had changed dramatically during the Ottoman period. The bedouins told Schumacher that the wādī had declined to become a "popular shelter for all sorts of refugees and criminal scum".

Except for a few sugar mills, operated by water power, there were only a few small hamlets. A water flow of about 0.75 m³ per second flowed through the Wādī al-ʿArab in June 1885, and the Wādī az-Zaḥar added the same amount of spring water. C. Steuernagel wrote:

"Where the valley widens and the water becomes shallow, there are large numbers of trout that are easy to catch. Once while bathing, Schumacher saw a black water snake, almost a metre long. These are said to be very common here and are highly dreaded"².

The archaeologist N. Glueck visited Tall Zirā'a in 1942. He reported the

"singularly imposing and completely isolated hill of Tall Zera'ah (...)"³

and mentioned a water source on the plateau of the tall as the

"result of a natural siphon phenomenon leading the underground flow of the water from the high-

1 Schumacher 1890, 110. 142 f. Schumacher visited Tall Zirā'a and described remains of rectangular buildings. His observations are published by C. Steuernagel (1926, 81).

2 Steuernagel 1926, 80. Citation is given in English translation; cf. also Schumacher 1890, 142 f. For Schumacher's travels see in general: Schumacher 1886.

3 Glueck 1951a, 182 Fig. 71.

er level of the hills beyond down to below the bottom and, as through a pipe piercing its center, up to the top of Tall Zera‘ah”.

Although the tall⁴ had already attracted attention due to its location and imposing appearance, no intensive research was conducted at this time, because of the hill’s location close to the border of Israel in the west (c. 7 km) and Syria in the north (c. 14 km). During the foundation of the State of Israel in 1948 and again during the Six Day War in 1967, the western part of the Wādī al-‘Arab was declared by the Jordanians as a military zone. A passage which had been open in all directions for millennia was thus essentially cut off from sections of its surroundings. The territory around Gadara and the Wādī al-‘Arab, in the triangle where Jordan, Syria and Israel meet, became the north-westernmost corner of the Hashemite Kingdom, and there was not even a paved road to the tall.

Also the construction of the Wādī al-‘Arab Dam in 1978 did not make a significant difference to the *status quo*. The archaeologists who investigated the area within the scope of a rescue survey prior to the dam construction did not appreciate the archaeological potential of the tall, which majestically overlooked the future reservoir.

Another period of time passed until the Oslo Peace Agreement was ratified in 1993, but it was only after the peace treaty between Jordan and Israel, which King Hussein and Prime Minister Yitzhak Rabin signed on October 26, 1994, that the area again became accessible to the public.

D. Vieweger, director of the Biblical Archaeological Institute Wuppertal (BAI) and since 2005 also of the German Protestant Institute of Archaeology (GPIA), travelled many times through the north-western part of Jordan between 1998 and 2000, exploring the area for a suitable tall site, which would serve as an authoritative chronological record for the region’s long and important cultural history. He found it in the Wādī al-‘Arab.

Tall Zirā‘a is located in the middle of the Wādī al-‘Arab (Figs. 0.1 and 0.2), was continuously occupied for at least 5,000 years, and offers an unique insight into the way of life of the region’s people. Its outstanding archaeological significance results from the artesian spring in its centre,

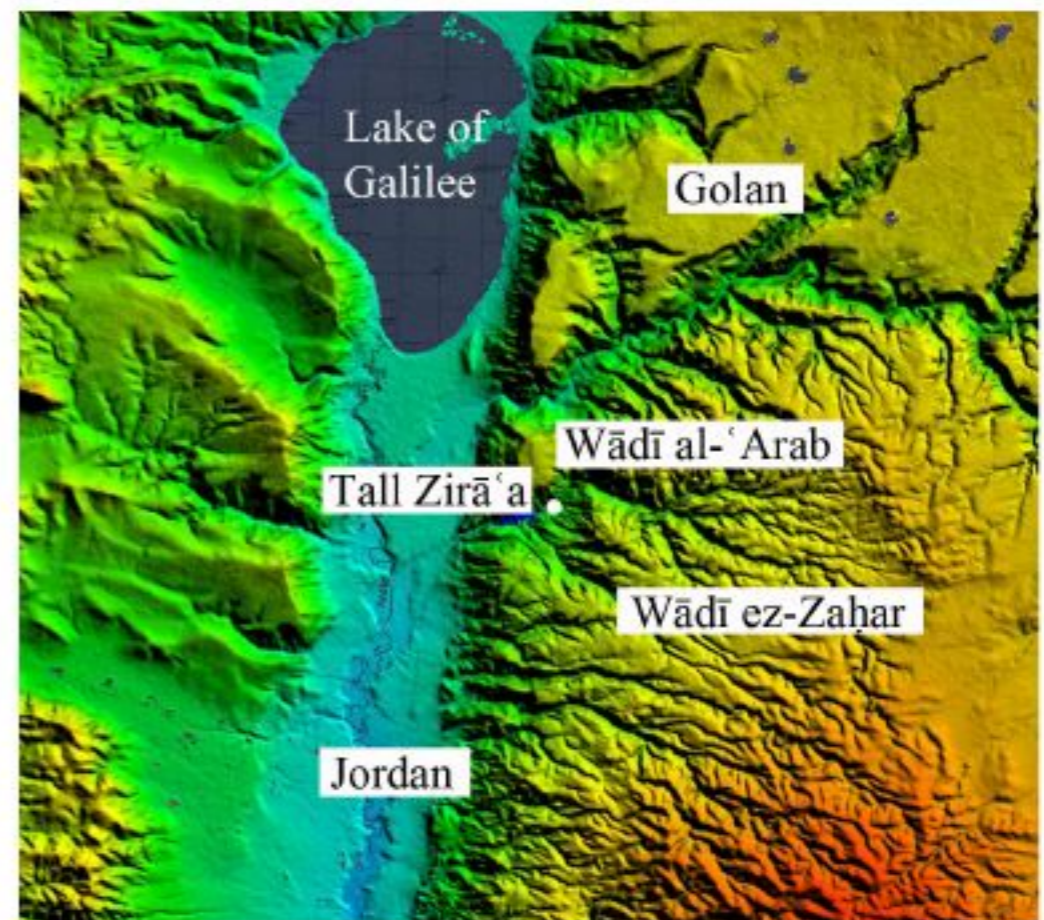


Fig. 0.2 Map showing the area around Tall Zirā‘a (Source: BAI/GPIA).

which created optimal settlement conditions over thousands of years. For this reason, Tall Zirā‘a offers an unusual opportunity to compile a comparative stratigraphy for northern Jordan from the Early Bronze Age to the Islamic period, while also making it possible to trace cultural developments in urban life, handicrafts and the history of religion over long periods. Moreover, here it is possible to study abundant remains from the Biblical periods in a broad cultural and historical context.

As mentioned above, a major trade route passed through the valley, connecting Egypt in the south with the Syrian-Mesopotamian region in the north (Fig. 1.22). The Wādī al-‘Arab also connects the Jordan Valley to the Mediterranean coast via the northern Jordan ford at Ġisr al-Mağāmi‘ (Gešer), as well as the plains of Jezreel and Tall al-Ḥiṣn (Beth Shean) to the eastern Jordanian highlands. It was possible to climb from the Jordan Valley, at some 290 m below sea level, to the fertile and very early populated Irbid-Ramtha basin, which lies around 560 m above sea level. Direct routes led from the Irbid-Ramtha basin to Dimašq (Damascus) in the north, Baġdād in the east, and ‘Ammān in the south. Because the Yarmuk Valley to the north and the Wādī Ziqlāb in the south are too steep and narrow to serve as major transport routes, the Wādī al-‘Arab played a prominent geopolitical role. Not surprisingly, economic success and the hard work of res-

4 The Arabic word ‘tell’ or ‘tall’ as well as the Hebrew word ‘tel’ will be written in this publication in the standard literary Arab version ‘tall’ or ‘Tall NN’.

idents across the millennia have left a profusion of traces in the valley. More than 200 sites of human habitation, from the very earliest settlements to the Islamic period, provide an eloquent testimony to the history of this region: settlements, channels, water mills, cisterns, oil presses, wine presses, watchtowers and grave sites.

Tall Zirā'a offered good living conditions for a settlement. The artesian spring offered an unfailing water supply, and the hill provided security. The tall rises impressively (depending on the direction) between 22–45 m above ground. As the only prominent natural elevation in the lower Wādī al-‘Arab, Tall Zirā'a dominates the valley. From here one cannot only see Gadara, but also easily monitor the narrow entrance of the wādī to the west.

The adjacent fertile wādī ensured adequate nourishment, with potentially arable land in the western and central valley, terraced slopes and spurs suited for rainfed agriculture in the east, as well as the wādī slopes that are suitable for grazing small livestock, forming a broad semicircle from the east and south to the west. As a result of his observations, D. Vieweger decided to implement preliminary investigations here from 1998 to 2000.

The ‘Gadara Region Project’ was launched in 2001 by the Biblical Archaeological Institute Wuppertal (BAI), Germany. In the first season, the surface of Tall Zirā'a was explored⁵, the tall was accurately surveyed, and more than 22,000 pottery sherds and many other finds were systematically collected and analysed. The survey findings helped to formulate the objectives of the excavation program, and to select suitable areas (residential, religious, administrative and craft production) for investigation.

The first excavation season on the tall was in 2003. The team was financed by the ‘Society of Friends of the BAI Wuppertal’ and travelled by Volkswagen bus from Wuppertal to Amman via Turkey and Syria, under the direction of D. Vieweger. An Ottoman period house inside the Gadara/Umm Qēs archaeological site was used both as living and working quarters; it was in a state of very poor repair at that time, but has been systematically restored during later seasons, providing modern bathroom and kitchen facilities. The results of the first season on Tall Zirā'a were so promising that the ‘Gadara Region Project’ was inaugurated, with

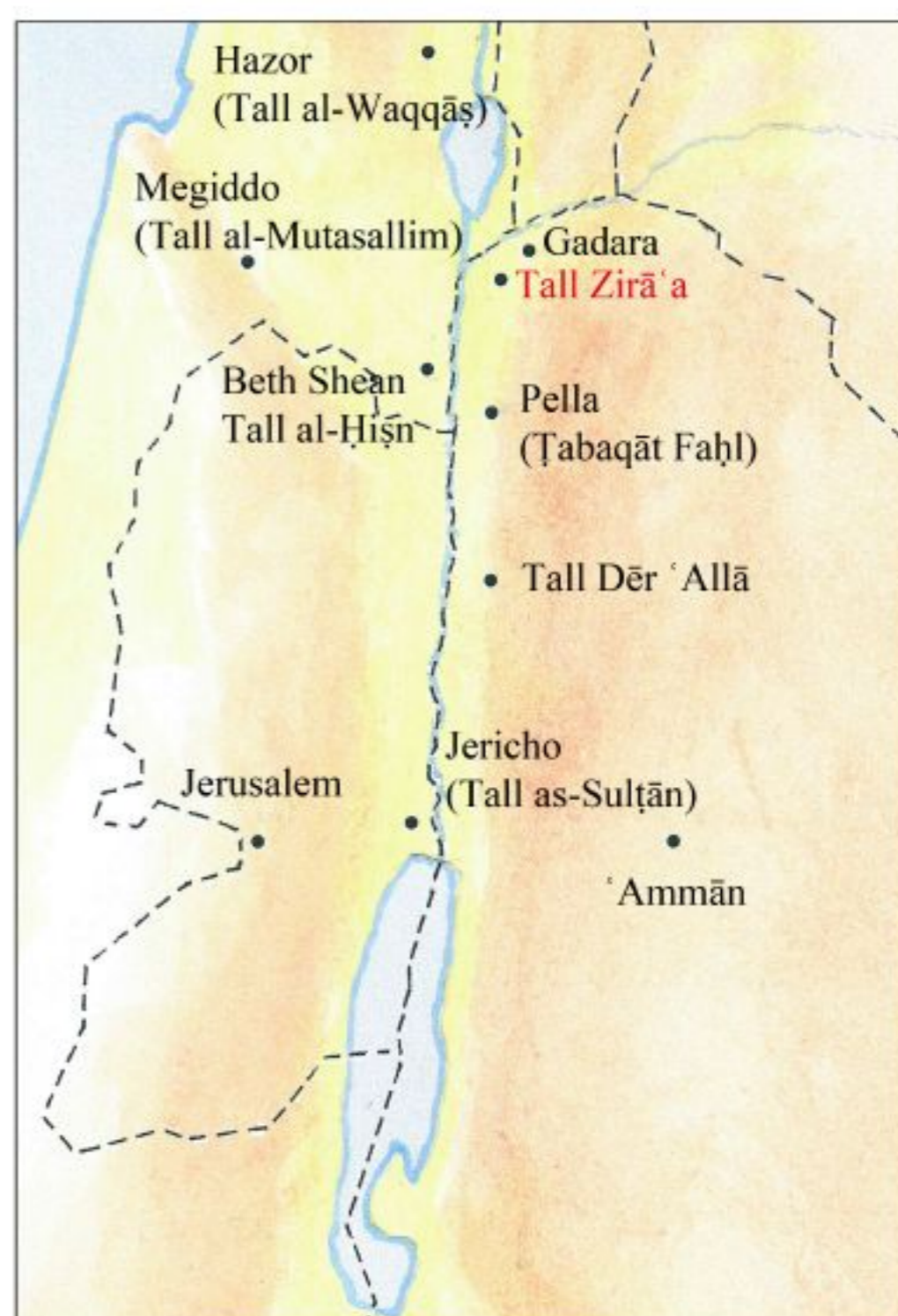


Fig. 0.3 Tall Zirā'a and its geographic location (Source: BAI/GPIA).

a planned timeframe of between ten to twenty years.

In 2004, the Biblical Archaeological Institute Wuppertal (BAI) under the directorship of D. Vieweger, and the German Protestant Institute of Archaeology (GPIA) in Amman (which also served as the research unit for the German Archaeological Institute [DAI]), under the directorship of J. Häser, agreed to a close partnership, which ensured ongoing archaeological and interdisciplinary collaboration for the remainder of the archaeological seasons. The German Protestant Institute of Archaeology in Jerusalem (GPIA), run by D. Vieweger since 2005, also joined the work in 2006. The cooperation with the GPIA Amman was confirmed by the new director of the Institute, F. Kenkel, from 2013 to 2016, and by K. Schmidt since autumn 2016.

During the course of the subsequent 18 seasons, twenty five strata in three areas have been uncovered, and several scientific processes and archaeological experiments have been carried out; archaeo-

5 See Vol. 1, Chap. 2. For this survey see also Vieweger et al. 2003, 191–216.

logical surface surveys were also completed for the area surrounding Tall Zirā'a, the Wādī al-'Arab, and the Wādī az-Zaḥar.

The slopes of Wādī al-'Arab from Tall Zirā'a upwards to the region of Šēdūr and Dōqara, and the region around the Wādī al-'Arab Dam were surveyed in 2009; large parts of this region had not been studied in detail before. In total 78 locations were documented, 30 of which were previously unknown. The survey was continued until 2012. All in all 327 sites were registered which cover an area from Tall Zirā'a to North Šūna.

All finds were stored at the excavation house in Umm Qēs. Some of the more important finds were exported to the Biblical Archaeological Institute Wuppertal (BAI) and restored by M. Blana; they were returned to the 'Department of Antiquities of Jordan' (DoA) over several stages, with the final delivering to Jordan in the spring of 2015. Furthermore, more than 50 objects discovered during the project are on display in the Jordan Museum in Amman.

Excavation results have been presented as articles in several journals, together with separate publications and dissertations⁶. In addition, the Tall Zirā'a website provides information about current activities on and around the tall in German and English⁷.

After 18 intensive seasons of work researching the tall and its environment, it was decided to interrupt excavation and survey activities in order to publish a complete record of the results thus far. To this end, it was decided that from 2012 until 2020 work would be comprised of study seasons in the excavation house at Umm Qēs, to process data and results gathered to date (for the excavations carried out see the film in *App. 0.1*).

A total of nine volumes are planned on the following topics:

Volume 1: Introduction.

Aims of the 'Gadara Region Project'; Tall Zirā'a and the Wādī al-'Arab; Research History of Tall Zirā'a; the 2001 Tall Zirā'a Survey; Scientific Methods; Framework of Archaeological Work on Tall Zirā'a.

Volume 2: Early and Middle Bronze Age (Strata 25–17)

Volume 3: Late Bronze Age (Strata 16–14)

Volume 4: Iron Age and Persian Period (Strata 13–9)

Volume 5: Hellenistic to Umayyad Period (Strata 8–3). Stratigraphy

Volume 6: Hellenistic to Umayyad Period (Strata 8–3). Ceramic, Glass and Metal Finds

Volume 7: Abbasid to Ottoman Period (Strata 2–1)

Volume 8: Wādī al-'Arab Survey

Volume 9: Archaeometry

All nine volumes will be published online in English, in order to make the results free of charge and accessible to a wide audience. In addition to this, publishing online enables the 3D-images and reconstructions, together with digital films, to be included with the material, which can thus be integrated and used interactively. Furthermore, an online publication will enable the attachment of original data from the excavations, such as plans and database extracts, which would be otherwise impossible. These additional documents will be published in German and will provide professional researchers with the ability to access the primary data itself, not only as they are interpreted.

6 See e.g. Vieweger et al. 2002a, 12–14; Vieweger et al. 2002b, 157–177; Vieweger et al. 2003, 191–216; Vieweger et al. 2016, 431–441; Vieweger 2003a, 10; Vieweger 2003b, 459–461; Vieweger 2007, 497–502; Vieweger 2010, 755–768; Vieweger 2013, 231–242; Häser et al. 2016a, 121–137; Häser et al. 2016b, 497–507; Häser – Vieweger 2005, 135–146; Häser – Vieweger 2007, 526–530; Häser – Vieweger 2009, 20–23; Häser – Vieweger 2012a, 693–696; Häser – Vieweger 2012b, 251–268; Häser – Vieweger 2014, 640; Häser – Vieweger 2015, 20–23; Vieweger – Häser 2005, 1–30; Vieweger – Häser 2007a, 1–27; Vie-

weger – Häser 2007b, 147–167; Vieweger – Häser 2009, 1–36; Vieweger – Häser 2010, 1–28; Vieweger – Häser 2015; Vieweger – Häser 2017a; Vieweger – Häser 2017b; Kenkel 2012; Kenkel 2013a, 1–24; Kenkel 2013b, 301–308; Kenkel 2016, 765–781; Kenkel – Vieweger 2014, 12; Schwermer 2014; Gropp 2013; Lehmann – Schulze 2015, 28–30; Schulze et al. 2014, 13; Soennecken – Leiverkus 2014, 14; Soennecken – Leiverkus 2016, 509–518; Soennecken 2017.

7 For an overview of publications see www.tallziraa.de (9.6.2018).

General remarks regarding systems and processes used within the publications follow herewith:

- The Israel or Palestine Grid 1923 is the basis for the geographical grid system used for the project. It was first used in autumn 2001 for 5 m x 5 m squares on Tall Zirā'a, and was consequently applied for excavation and survey work alike (see *Vol 1., Chap. 4.1.*).
- Citation styles are based on the directives provided by the German Archaeological Institute (DAI), but have been adapted to the conventions of English language publications.
- In order to minimise misunderstanding, the problem of transliterating Arabic and Hebrew words into English spelling using Latin letters for local sites and family names is dealt with by using the transcription system of the 'Deutsche Morgenländische Gesellschaft', based on the directives of TAVO (see the Tübinger Bibel-atlas).
- For detailed explanations of the chronology of the Southern Levant in the scope of the history of Egypt, Syria and Mesopotamia, see Vieweger 2012, 459–507 (*Vol. 1., Chap. 4.3.*).
- In this report the name of the site is called *Tall Zirā'a*. Other transcriptions are e.g.: *Tell Zer'ah* (MEGA Jordan; Jadis; Kerestes et al. 1977/1978; Glueck 1951a; Glueck 1951b); *Tell Zer'a* (Reicke – Rost 1979); *Tell Zara'a/Tell Zara'a* (Schumacher 1890 and Steuernagel 1926); *Tell Zira'a* (Hanbury-Tenison 1984).
- All dimensions in the catalogues as well as in the figure captions are given as cm, if not otherwise stated.

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Dieter Vieweger and Jutta Häser



Fig. 0.4 Tall Zirā'a with location of Area I to III and the spring (APAAME, David Kennedy, 2011)

INTRODUCTION

by Jutta Häser/Dieter Vieweger

The present volume is the sixth in a series of nine planned volumes of the final report about the excavations on Tall Zirā'a directed by D. Vieweger and J. Häser¹. It will provide the results of the analyses on the Hellenistic to Umayyad pottery by F. Kenkel as well as the Hellenistic to Islamic glass and metal finds investigated by p. Hoss. Since many types of these find groups have a long life-span, it was decided to present them not stratum by stratum but by types and/or groups.

The detailed stratigraphic analysis, the description of the architectural remains, the scrutiny of the contexts as well as the interpretation of the Hellenis-

tic to Umayyad strata—these are Strata 8 to 3—will be realized by S. Schütz and J. Häser in Vol. 5.1 and 5.2 of this series.

So far on Tall Zirā'a, three areas (I, II and III) or excavations sites were opened, all serving different aims. In Area I residential areas and workshops were expected². In Area II, administrative buildings were supposed. In Area III a large representative building of Roman and/or Byzantine period was expected due to the surface finds.

The excavations from 2003 to 2011 and a short campaign in 2014 showed a very different use of

1 Vieweger – Häser 2017a, 4; Vieweger – Häser 2017b, 13–22.

2 Vieweger – Häser 2017c, 27 f.

the areas during the various periods³.

The architectural remains of the Hellenistic period (Stratum 8) were found in Area I and II. They represent a small fortified structure and agricultural installations⁴. No architectural features of Hellenistic date were found in Area III for the time being. However, finds like Hasmonean coins—although found in later strata—might be a hint to occupational remains of the Hellenistic period in this area. In any case, they were heavily damaged by the building of a large vaulted chamber of probably Roman date (see below).

Architecture of the Roman period (Strata 7 and 6) was found in all three excavated areas. The main feature was a Roman villa in Area II with associated agricultural installations in Area I. The large vaulted structure that was found in Area III was surely used as a cistern at some time but it is questionable if this was its original purpose⁵. It could also have

been built as substructure for a large building.

During the Late Roman and Byzantine period (Strata 5 and 4) again, a new settlement structure can be observed⁶. Now, the main architectural building was situated in Area III. It was a large church with attached rooms which has been only partly excavated for the time being. A Greek mosaic inscription mentions monks and a deuterarios, making clear that this church belonged to a monastery⁷. Therefore, the extended domestic quarters in Areas I and II have to be interpreted as part of this monastery.

No dramatic changes could be recognized during the Umayyad period (Stratum 3). The internal structure of the church in Area III was reorganized and the living quarters in Areas I and II were compacted by using almost all non built-up spaces for further buildings.

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3 Vieweger – Häser 2017c, 29–57.

4 Schütz forthcoming.

5 Vieweger – Häser 2017b, 19 and Fig. 1.11; Häser forthcoming a.

6 Häser forthcoming.

7 Vieweger – Häser 2017c, Fig. 1.84; Rothe et al. 2017, 268–270.

1. THE HELLENISTIC, ROMAN AND BYZANTINE POTTERY

by Frauke Kenkel

1.1. Introduction

The following catalogue presents the pottery from the Hellenistic to Byzantine periods from the excavations between 2003 and 2011. All sherds originated in Area I and II on top of Tall Zirā'a. The relevant Strata are:

- 08 Hellenistic period – small fortified settlement
- 07 a–c Early Roman period – Roman villa
- 06 a–c (Early) Roman period – Roman villa
- 05 Late Roman – Early Byzantine period – small military post
- 04 a–c Byzantine period – settlement and monastery

The pottery included in the catalogue is numbered within its types consecutively starting from 1 in combination with letters, which refer to the type. In addition, an inventory number was given during the find processing at each campaign that is used for the project's own database. Almost all sherds come from mixed pottery assemblages, because the foundations of the Byzantine dwelling disturbed the older Hellenistic and Roman strata. Therefore it was not possible to single out specific undisturbed contexts and the study is based mainly on typological criteria and comparisons with published pottery of different sites of the Eastern Mediterranean.

Altogether over 80.000 pottery sherds were investigated, from which *c.* 11.000 were diagnostic sherds that have been analysed further. Based on them the following catalogue and plates represent the typology of the pottery of the classical periods at Tall Zirā'a. All investigated sherds were washed, classified, drawn by the author and pictures were taken of specific examples. In addition, all data was entered into the project's own database.

In the catalogue which follows, bases and lids are only shown if they have a significant shape and could be assigned to specific examples. The chronological designations of the examples can be as following: Hellenistic (332–63 BC), Early Roman

(63 BC – second half first century AD), Roman (end first century AD – 324 AD), Byzantine (324–636 AD). It is obvious that pottery does not follow our chronological separation and that different shapes last much longer than only one period, and therefore the dates range from Hellenistic–Roman or Roman–Byzantine etc. Also the Byzantine period in behalf of pottery dating does not stop at 636 AD but lasts until the end of the seventh century AD. Only with well defined imports and specific well known types and shapes the dating could be more precise as it is mentioned in the catalogue.

The pottery was separated into imported and local-regional wares as well as in oil lamps and terracotta figurines as four main groups. Within these main groups it was divided into sub-groups like table ware, everyday vessels, cooking vessels and vessels for personal use and these sub-groups are presented in the catalogue in a chronological order, starting with open to closed forms. All drawings of the pottery vessels are in scale 1:3 if not stated otherwise. Oil lamps and terracotta figurines are in scale 1:2.

Altogether 62 different fabric groups could be distinguished during the analysis of the material. They are separated into Imported Wares, Fine Wares, Coarse Wares, Grey and Green Wares as well as into Cooking Wares¹. The different fabrics were named after the common designation within the published material like Eastern Sigillata, but the ones that did not have a specific designation were named after a system that had been introduced for the pottery of Gadara and Tall Zirā'a in former times. Criteria for the different groups were the colour, the firing, the temper, the hardness and the surface treatment².

Most of the imported wares could be associated to the known wares of the Eastern Mediterranean that can be seen in their names. The imported wares are represented only with 7 % in the whole pottery material. They can be dated from the fourth century BC to the seventh century AD.

1 For detailed description of the different fabric groups see Kenkel 2012.

2 Kerner – Maxwell 1990, 240.

The main part of the fabric groups can be classified as numerous local-regional wares. Different shapes can appear in the same fabric and the same shape in different fabrics. However, there are tendencies in one or another fabric group. For example, the vessels that are mainly made of fabric group 'Cl BP' are bigger jars or amphorae from the Early Roman and Roman period. However, there is a Byzantine-Islamic variant of this group, with a deeper red colour and a greater hardness of the sherds, but with the same buff slip. Somehow it is difficult to differentiate these two from each other, and most of the times it is only possibly due to the rim forms. Big jars and amphorae of the Hellenistic–Early Roman period also mainly represent fabric groups 'Cl Buff' and 'Cl Buff hard', but there are also few examples of small open vessels made of these fabrics. 'Cl Buff' is with more than 13.594 examples by far the biggest group within the different fabrics. Group 'Cl Chal Red' can be dated mainly into the Hellenistic-Roman period and has a higher lime share than all the other groups. Especially examples of the so-called table ware and imitations of Sigillata forms are made from fabric group 'Cl Bu2Br-f' that comes often with a red, brown or black matt-glossy slip. Only very few bigger vessels like jars and jugs are made from this ware that can be dated Hellenistic–Roman. Another Hellenistic–Roman fabric is 'Cl Bu2Br-soft' with a focus in the Hellenistic period. It is mostly used for small juglets, small bowls, and oil lamps. The following fabric groups are representing first of all the Hellenistic–Roman period fabrics: 'Cl Chal Red-c', 'Cl Red BuSl', 'Cl Chal Bu2Br' and 'Cl Bu2Red-grog-c' as well as the Grey Wares 'Cl Grey'. The latter ones have been used to produce smaller vessels and oil lamps. Only six different groups can be assigned to the Roman period: 'Cl Red2Br-grey core', 'Cl Bu2Br amph', 'Cl Red2Br- grey core hard', 'Cl Red-Bu2Br core'. These fabrics have been mainly used to produce jars and amphorae, but also in lesser quantities for

bowls. The Roman fabric group 'Cl Bu2Red grog' is especially used for the so-called mortaria. Only a variant of 'Cl Chal Red' and the so-called 'Jerash' ware can be dated mainly in the Roman-Byzantine period. 'Cl Red2Br-mica' and 'Cl Coarse Red2Br-ch temp' are fabrics that only appear in vessel types of the Byzantine period. But there are also fabric groups that can be dated into the Byzantine–Early Islamic periods, like most of the 'Green Wares' (Cl Grn) and 'Cl BS WP'. The last mentioned fabric was first of all used for the so called bag-shaped amphorae and can appear in two variants, one is more orange and the other one more greyish. Especially the examples of the Umayyad period have beige painted circles and waves on a ribbed surface.

The so-called coarse wares can be classified into Hellenistic, Hellenistic-Roman and Byzantine groups. 'Cl Coarse Bu2Br 2' is a Hellenistic fabric, while 'Cl Coarse Bu2Br 1', 'Cl Coarse Red2Br 1', 'Cl Coarse Red2Br 4', 'Cl Coarse Bu2Br 3', 'Cl Coarse Bu2Br HM', 'Cl Coarse Red2Br 3' and 'Cl Coarse Red2Br 2' are Hellenistic-Roman fabric groups. Above all fabric 'Cl Coarse Red2Br-ch temp' can be found within the everyday vessels, mainly basins.

The cooking ware fabrics can be classified into five groups that can be dated differently. They constitute 31 % of all the pottery at Tall Zirā'a and are therefore the second largest group after the everyday vessels. The earliest cooking ware is 'Cl Red CP 1' that can be dated mainly into the Hellenistic and Early Roman periods. 'Cl Red CP 2' and 'Cl Red CP 3' are Hellenistic-Roman fabric groups and are very similar to the so-called 'Galilaeen Ware' mentioned by Adan-Bayewitz³. For the Roman-Byzantine periods fabric groups 'Cl Red CP 4' and 'Cl Red CP 5' are characteristic.

The terracotta fabrics had been classified only by visual features and were distinguished into 'TC fine', 'TC medium' and 'TC buff' and can be dated into the Hellenistic-Roman period.

1.2. Imports

Altogether 12 different groups of imports could be distinguished, but they make only 7 % of the whole pottery repertoire. They originate from Africa, Asia Minor, Rhodes and Cyprus, including Rhodian Amphorae. If one would only investigate the Rhodian Amphorae stamps, one would see a concentration of imports especially during the second and third centuries BC. If you dismiss the Rhodian Amphorae, the concentration of imports is shifting into the second and first centuries BC. The Hellenistic imports are 'Rhodian Amphorae', 'Ephesian Grey Plates', 'Westslope style ware' and 'Relief bowls'. The ones of the Early Roman period are 'Eastern Sigillata A' (ESA), 'Eastern Sigillata D' (ESD) and even one example of 'Gaulish Sigillata' (TS). From the Byzantine period there is only one example of 'African Red Slip' (ARS) Ware, more 'Cypriot Red

Slip Ware' (CRS) and a lot of 'Late Roman C Ware' (LRC)⁴. A concentration of Byzantine imports within the material can be seen between the fifth and sixth centuries AD. With 85.81 % the LRC is the dominating import in the Byzantine period and within the LRC it is Hayes Form 3 that is leading with 78.2 % of all LRC vessel forms.

It is clear that there is an increase of imported wares from the Hellenistic to the Roman period. Altogether 846 examples had been designated as imports. 28.6 % are from the Hellenistic period, 37 % from the Late-Hellenistic-Early Roman period and 34.4 % from the Byzantine period. Between the second and fourth centuries AD somehow there are almost no imports at all. Only in the Byzantine period they increase again before the imported wares dropped down again at the end of the Byzantine period.

1.2.1. Hellenistic Imports

1.2.1.1. Grey Ware

TZ 005978-021

Type: Bowl

Rim Form: Flaring wall with rounded lip and grooves at the outside of the upper part (2 pieces).

Figure Reference: Pl. 1.1, no. GW1

Est. D: 15

Parallel: **Late Hellenistic:** Bar-Nathan 2002, Pl. 16, 271–278; Gassner 1997, Tf. 72, H15; Hannestad 1983, Pl. 4, 50; Kenkel 2012, Pl. 7, GW1; Ladstätter 2005, Pl. 154, K134.

Note: Only one example.

TZ 100689-015

Type: Ephesian Plate

Rim Form: Round plate with out-curved thickened rim and pointed lip with black slip (GLE Y1 2.5/N).

Figure Reference: Pl. 1.1, no. GP1

Est. D: 34

Parallel: **Late Hellenistic – Augustean:** Kenkel 2012, Pl. 7, GP1; Zabehlicky-Scheffenegger et al. 1996, Pl. 11, 1–2.

Note: Only one example with two pieces.

TZ 101031-002

Type: Ephesian Plate

Rim Form: Round plate with low profiled rim and flat lip with black slip (GLE Y1 4/10Y).

Figure Reference: Pl. 1.1, no. GP2

Est. D: 40

Parallel: **Late Hellenistic – Augustean:** Kenkel 2012, Pl. 7, GP2; Zabehlicky-Scheffenegger et al. 1996, Pl. 11, 3.

Note: Only one example.

1.2.1.2. Black Slip Ware

TZ 101533-028

Type: Kantharos

Form: So-called 'Daumenplatte' (band handle) with black slip.

Figure Reference: Pl. 1.1, no. Sgk1

Est. D: 9

Parallel: **3rd – mid 2nd century BC:** Kenkel 2012, Pl. 7, Sgk1; Berger 1993, Fig. 92, 280; Crow-

4 The LRC is the market-dominating ware in the Eastern Mediterranean between the fourth to seventh centuries AD.

foot et al. 1957, Fig. 46,4; von Hesberg 1989, Fig. 5, 27; Kramer 2004, Pl. 49, SGK22; Lejpunskaja et al. 2010, Db-96, Pl. 101; Mlynarczyk 2001, Fig. 2, 38. Fig. 6, 91; Rosenthal-Heginbottom 1995, Fig. 5.8:6; Rotroff 1997, Fig. 4–6; Salles 1993, Fig. 229, 503; Smetana-Scherrer 1982, Pl. 34, 460.

Note: This handle type normally belongs to vessels of the so-called ‘Westslope’ pottery or the relief bowls⁵. Only one example.

1.2.1.3. Westslope Style Ware

TZ 006023-041

Type: Kantharos (10YR 5/3)

Form: Black slipped, painted body sherd (GLE Y1 2.5/N).

Figure Reference: Pl. 1.1, no. Was1

Wall Th: 0.6

Parallel: 3rd – 2nd century BC: Gassner 1997, Pl. 11, 181; Kenkel 2012, Pl. 7, Was1; Lejpunskaja et al. 2010, Db-156, Pl. 105; Mitsopoulos-Leon 1991, Pl. 26, B25–28; Rosenthal-Heginbottom 1995, Fig. 5.8:9; Fig. 5.11:15; Fig. 5.12:1; Rotroff 2002, Fig. 1,2; Waagé 1948, Fig. 8, 6–7.

Note: Without detailed analysis it is not possible to make any further suggestions where these examples come from. Only one example.

1.2.1.4. Relief Bowls

TZ 002494-026

Type: Bowl

Form: Body sherd, fabric (7.5YR 7/4), black slip (10R 5/4).

Figure Reference: Pl. 1.1, no. Rb1

Wall Th: 0.45

Parallel: 2nd – 1st centuries BC: Crowfoot et al. 1957, Fig. 62, 7, 9, 12; Dereboylu 2001, Pl. 18, 135; Kenkel 2012, Pl. 7, Rb1; Kossatz 1990, Fig. 2, M 40. Fig. 3, M55-56; Kramer 2004, Pl. 56, Mb 12. Pl. 58, MB 46; Lejpunskaja et al. 2010, F-4, Pl. 168; Mitsopoulos-Leon 1991, Pl. 87, D59. Pl. 88, D 63; Papanicolaou-Christensen – Friis Johansen 1971, Fig. 10, Nr. 105, 22; Rosenthal-Heginbottom 1995, Fig. 5.4:3; Waagé 1948, Fig. 9:14; Fig. 10: 15, 34.

Note: Only one example.

TZ 005780-005

Type: Bowl

Rim Form: Body sherd, fabric (7.5YR 7/4), red slip (10R 5/6).

Figure Reference: Pl. 1.1, no. Rb2

Wall Th: 0.6

Parallel: 2nd – 1st centuries BC: Dereboylu 2001, Pl. 15, 96; Kenkel 2012, Pl. 7, Rb2; Kramer 2004, Pl. 62, MB 149–160; Kossatz 1990, Fig. 2, M46–47; Lejpunskaja et al. 2010, F-25, Pl. 173. F-34, Pl. 175; Mitsopoulos-Leon 1991, Pl. 77, D9. Pl. 78, D16, D17. Pl. 79, D22; Rosenthal-Heginbottom 1995, Fig. 5.5:4; Rotroff 1982, Pl. 21, 118; Waagé 1948, Fig. 12: 11.

Note: Only one example.

TZ 006736-053

Type: Bowl

Form: Body sherd, fabric (10R 5/6), black slip (10R 5/6).

Figure Reference: Pl. 1.1, no. Rb3

Wall Th: 0.4

Parallel: 2nd – 1st centuries BC: Dereboylu 2001, Pl. 18, 135; Kenkel 2012, Pl. 7, Rb3; Kossatz 1990, Fig. 2, M 45. Fig. 3, M63; Mitsopoulos-Leon 1991, Pl. 83, D39. Pl. 88, D61; Waagé 1948, Fig. 9:40; Fig. 10: 21, 24, 31, 33.

Note: Only one example.

TZ 020130-001

Type: Bowl

Form: Body sherd, fabric (10YR 5/3), black slip (5Y 4/1).

Figure Reference: Pl. 1.1, no. Rb4

Wall Th: 0.4

Parallel: 2nd – 1st centuries BC: Dereboylu 2001, Pl. 22, 199–201; Kenkel 2012, Pl. 7, Rb4; Kossatz 1990, Fig. 16, M 317. M319; Mitsopoulos-Leon 1991, Pl. 87, D57; Papanicolaou-Christensen – Friis Johansen 1971, Fig. 13, Nr. 127, 30.

Note: Only one example.

TZ 100097-007

Type: Bowl

Rim Form: Flaring wall, slightly incurved rim with thinned rounded lip; with red- to darkbrown metallic glossy slip.

Figure Reference: Pl. 1.1, no. Rb5

Est. D: 10

5 Kenkel 2012, 43.

Parallel: 2nd – 1st centuries BC: Dereboylyu 2001, Pl. 13, 60; Kossatz 1990, Fig. 3, M56; Fig. 12, 258, Fig. 15, M309; Lejpunskaja et al. 2010, F-14, Pl. 171. F-19, Pl. 172; Mitsopoulos-Leon 1991, Pl. 81, D33. Pl. 87, D55; Rosenthal-Heginbottom 1995, Fig. 5.4:19, 20; Smetana-Scherrer 1982, Pl. 49, 653. *Note:* The decoration element of the six leaves rosette is a common feature within the relief bowls⁶. Only one example.

TZ 101526-001

Type: Bowl

Form: Decorated body sherd, red to reddish brown mat slip.

Figure Reference: Pl. 1.1, no. Rb6

Wall Th: 0.3

Parallel: 2nd – 1st centuries BC: Dereboylyu 2001, Pl. 15, 96. Pl. 16, 112–113, Kenkel 2012, Pl. 7, Rb6; Kramer 2004, Pl. 61, MB 112–148; Kossatz 1990, Fig. 1, M 8; Lejpunskaja et al. 2010, F-3, Pl. 168. F-19, Pl. 172; Mitsopoulos-Leon 1991, D7; Papanicolaou-Christensen – Friis Johansen 1971, Fig. 16, Nr. 148, 34; Rosenthal-Heginbottom 1995, Fig. 5.5:21; Rotroff 1982, Pl. 15, 87; Waagé 1948, Fig. 11: 18-20; Fig. 12: 2, 6–10.

Note: Only one example.

TZ 101531-043

Type: Bowl

Rim Form: Convex body wall, everted rim and rounded lip; dark brown to black mat-glossy slip.

Figure Reference: Pl. 1.1, no. Rb7

Est. D: 15

Parallel: 2nd – 1st centuries BC: Crowfoot et al. 1957, Fig. 62, 10, 14; Dereboylyu 2001, Pl. 20, 161–176; Kenkel 2012, Pl. 7, Rb7; Kossatz 1990, Fig. 2, M 40. Fig. 3, M55–56; Kramer 2004, Pl. 56, MB6, MB11, MB13, MB15. Pl. 58, MB 50–54. Pl. 59, MB 55–63; Lejpunskaja et al. 2010, F-8, Pl. 169; Mazar 2006, Fig. 15.2.15; Mitsopoulos-Leon 1991, Pl. 87, D59. Pl. 89, D63; Papanicolaou-Christensen – Friis Johansen 1971, Fig. 12, Nr. 103, 27; Rotroff 1982, Pl. 11, 66; Waagé 1948, Fig. 9: 17, 25, 53; Fig. 10: 2, 10, 41.

Note: The remains of an ionic kyma as part of the decoration can be seen. Only one example.

1.2.1.5. Rhodian Amphorae

TZ 101574-001

Type: Amphora

Form: Handle fragment with square stamp: first line: ΕΠΙ ΑΡΙΣΤΕΙΔΑ, second line: ΥΑΚΙΝΘΙΟΥ

Figure Reference: Pl. 1.2, no. RAm1

Handle W: 4.1

Parallel: 205–176 BC: Bleckmann 1912, Nr. 51, 253; Börker 1974, Nr. 6, 36; Börker 1998, 80–88.90, 22; Burow 1998, Nr. 84, 83; Calvet 1982, Nr. 26, 19; Grace 1974, E11, 304; Grace 1985, 8; Jöhrens 1999, Nr. 138, 55; Jöhrens 2009, Nr. 61, 226; Kenkel 2012, Pl. 8, RAm1, Pl. 62, Fig. 9; Kramer 2004, AS5–AS6; Lungu 1990, AII, 2b. 8b, AIV, 21; Snow et al. 2008, Nr. 282, 392. Nr. 2295, 394.

Note: Only one example.

TZ 004313-028

Type: Amphora

Form: Handle fragment with round stamp and rose inside: ΕΠΙ ΑΥΤΟΚΡΑΤΕΥΣ ΔΑΛΙΟΥ

Figure Reference: Pl. 1.2, no. RAm2

Est. D: 10

Handle W: 4

Parallel: Around 146 BC: Ariel 2000, Nr. 5, 270; Bleckmann 1912, Nr. 88, 254; Crowfoot 1957, 381; Grace 1974, E7, 304; Jöhrens 1999, Nr. 203, 78; Kenkel 2012, Pl. 8, RAm2, Pl. 62, Fig. 9; Lejpunskaja et al. 2010, L-166, Pl. 277.

Note: Only one example.

TZ 101356-017

Type: Amphora

Form: Handle fragment with square stamp: first line: ΕΠΙ ΠΑΥ, second line: ΣΑΝΙΑ

Figure Reference: Pl. 1.2, no. RAm4

Handle W: 4

Parallel: 240–210 BC: Bleckmann 1912, Nr. 203, 257; Börker 1974, Nr. 1.10.25, 33; Burow 1998, Nr. 313, 97; Calvet 1982, Nr. 81–82, 31–32; Crowfoot 1957, 379. 382; Grace 1950, 13; Grace 1974, E12, 304; Jöhrens 1999, Nr. 58, 30; Kenkel 2012, Pl. 8, RAm4, Pl. 62, Fig. 9; Kramer 2004, AS63; Rosenthal-Heginbottom 1995, Nr. 64, 191; Snow et al. 2008, Nr. 3495, 395.

Note: Only one example.

⁶ Kenkel 2012, 43.