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Tall Zirā'a

The Gadara Region Project (2001-2011)

Final Report

Volume 4

Iron Age (Strata 13–9)

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LIST OF ABBREVIATIONS

Abbreviated Journals and Series

AA	Archäologischer Anzeiger	BCH	Bulletin de correspondance hellénique
AAJ	Annual of the Department of Antiquities	BibAr	Biblische Archäologie
AASOR	The Annual of the American Schools of Oriental Research	BICS	Bulletin of the Institute of Classical Studies
ActaPraehistA	Acta praehistorica et archaeologica	BIFAO	Bulletin de l'Institut français d'archéologie orientale
ADAJ	Annual of the Department of Antiquities of Jordan	BZAW	Beihefte zur Zeitschrift für die alttestamentliche Wissenschaft
ADPV	Abhandlungen des Deutschen Palästina-Vereins	CAH	Cambridge Ancient History
AF	Archäologische Forschungen	CurrAnthr	Current Anthropology
AiD	Archäologie in Deutschland	DaM	Damaszener Mitteilungen
AJA	American Journal of Archaeology. The Journal of the Archaeological Institute of America	DOP	Dumbarton Oaks Papers
AM	Athener Mitteilungen	EdF	Erträge der Forschung
ANET	Ancient Near Eastern Texts Relating to the Old Testament	EI	Eretz Israel
Ant	Antiquity	EtTrav	Études et travaux
AnnuBrit Sch Athens	Annual of the British School at Athens	FiE	Forschungen in Ephesos
ARA	Annual Review of Anthropology	GlasBeograd	Glasnik. Srpsko arheološko društvo (Journal of the Serbian Archaeological Society)
AS	Anatolian Studies. Journal of the British Institute in Ankara	HThKAT	Herders theologische Kommentar zum Alten Testament
ASOR	American Schools of Oriental Research	IAA	Israel Antiquity Authority
BAH	Bibliothèque archéologique and historique	IEJ	Israel Exploration Journal
BAIAS	Bulletin of the Anglo-Israel Archaeological Society	JASc	Journal of Archaeological Science
BaM	Baghdader Mitteilungen	JGS	Journal of Glass Studies
BAR	Biblical Archaeology Review	JANES	Journal of the Ancient Near Eastern Society
BarIS	British Archaeological Reports. International Series	JArchRes	Journal of Archeological Research
BASOR	Bulletin of the American Schools of Oriental Research	JAS	Journal of Archaeological Science
		JBL	Journal of Biblical Literature
		JEMAHS	Journal of Eastern Mediterranean Archaeology and Heritage Studies
		JGA	Journal of Greek Archaeology

JMA	Journal of Mediterranean Archaeology	PJb	Palästina Jahrbuch des Deutschen Evangelischen Instituts
JNES	Journal of Near Eastern Studies	RB	Revue Biblique
JoE	Journal of Ethnobiology	REA	Revue des études anciennes
JRA	Journal of Roman Archaeology	ReiCretActa	Rei Cretariae Romanae Fautorum acta
JSOT	Journal for the Study of the Old Testament	RSO	Ras Shamra Ougarit
KölnMusB	Kölner Museums-Bulletin	SAK	Studien zur Altägyptischen Kultur
Lev	Levant	ScMed	Scripta Mediterranea
MedA	Mediterranean Archaeology	Sci. Adv.	Science Advances
Nat Ecol Evol	Nature Ecology & Evolution	Sci Rep	Scientific Report
NEA	Near Eastern Archaeology	SHAJ	Studies in the History and Archaeology of Jordan
NEAHL	The New Encyclopedia of Archaeological Excavations in the Holy Land	SJOT	Scandinavian Journal of the Old Testament. An International Journal of Nordic Theology
NEAF Bulletin	Near Eastern Archaeological Foundation Bulletin	StBiFranc	Studium biblicum Franciscanum. Liber Annuus
NEBAT	Die neue Echter Bibel. Altes Testament	TA	Tel Aviv
OAM	Orientis Antiqui Miscellanea	TRAC	Theoretical Roman Archaeology Conference
OccOr		UPA	Universitätsforschungen zur Prähistorischen Archäologie
OEANE	Oxford Encyclopedia of Archaeology of the Near East	VT	Vetus Testamentum
OJA	Oxford Journal of Archaeology	WdO	Welt des Orients
OLA	Orientalia Lovaniensia Analecta	WuB	Welt und Umwelt der Bibel
OrA	Orient-Archäologie	ZAW	Zeitschrift für die alttestamentliche Wissenschaft
QDAP	The Quarterly of the Department of Antiquities in Palestine	ZDPV	Zeitschrift des Deutschen Palästina-Vereins
PEFA	Palestine Exploration Fund Annual	ZPE	Zeitschrift für Papyrologie and Epigraphik
PEQ	Palestine Exploration Quarterly		
PF	Pergamenische Forschungen		

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		

Abbreviations used in the catalogues

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

Abbreviated Periods

Paleol.	Paleolithic	Rom.	Roman
Neol.	Neolithic	E Rom.	Early Roman
Chalcol.	Chalcolithic	L Rom.	Late Roman
BA	Bronze Age	Byz.	Byzantine
EBA	Early Bronze Age	Isl.	Islamic
MBA	Middle Bronze Age	E Isl.	Early Islamic
LBA	Late Bronze Age	L Isl.	Late Islamic
IA	Iron Age	Um.	Umayyad
IA I	Iron Age I	Abb.	Abbasid
IA II	Iron Age II	Maml.	Mamluk
IA IIC	Iron Age IIC	Ayy.	Ayyubid
Hell.	Hellenistic	Ottom.	Ottoman

Abbreviations for ware groups used by A. Schwermer

HM Buff	Handmade Buff	WM R2B P	Wheel made Red to Brown Polished
HM R2B	Handmade Red to Brown	WM Brick-Red	Wheel made Brick-Red
HM GW	Handmade Grain Washed	WM Coarse	Wheel made Coarse
HM P	Handmade Polished	WM Eggshell	Wheel made Eggshell
HM NP	Handmade Net Pattern	WM BP	Wheel made Black Polished
HM S	Handmade Smooth	ChocWh	'Chocolate-on-White'
HM Combed	Handmade Combed	WM WP	Wheel made White Polished
HM Kh Kerak	Handmade Khirbet Kerak	WM WSl	Wheel made White Slip
HM Metallic	Handmade Metallic	CP 6	Cooking Pot 6
HM Coarse	HM Coarse	CP 5	Cooking Pot 5
WM C Buff	Wheel made Common Buff	CP 3	Cooking Pot 3
WM C R2B	Wheel made Common Red to Brown	Wh Sl (Cyp)	Cypriot White Slip
WM S Buff	Wheel made Smooth Buff	Base Ring I (Cyp)	Cypriot Base Ring
WM S R2B	Wheel made Smooth Red to Brown	Myc III	Mycenaean
WM Buff P	Wheel made Buff Polished		

PREFACE

by D. Vieweger/J. Häser



Fig. 0.1 Tall Zirā'a. View from east to west. 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-‘Arab 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 Hasemite 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, which creat-

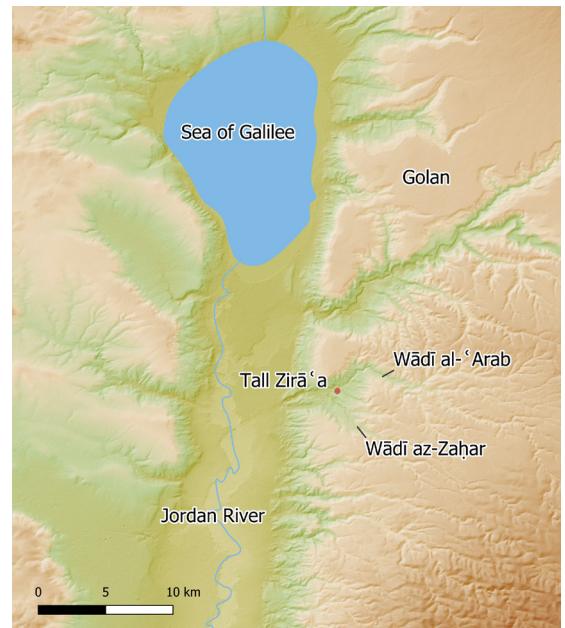


Fig. 0.2 Map showing the area around Tall Zirā'a (P. Leiverkus; Source: BAI/GPIA).

ed 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. The Wādī al-‘Arab also connects the Jordan Valley to the Mediterranean coast via the northern Jordan ford at Ġisr al-Maḡāmi‘ (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, Baḡdād in the east, and Amman in the south. Because the

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’.

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 residents 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 unfailling 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 liv-



Fig. 0.3 Tall Zirā‘a and its geographic location (P. Leiverkus; Source: BAI/GPIA).

ing 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 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 directors of the institute, F. Kenkel, from 2013 to 2016, and by K. Schmidt from 2016 to 2022.

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

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; archaeological 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 Ṣēdūr 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 Ṣūna.

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 Roman Period (Strata 8–6). Stratigraphy

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

Volume 7: Byzantine to Umayyad Period (Strata 5–3)

Volume 8: Wādī al-‘Arab Survey

Volume 9: The 2018 and 2019 Excavation Sessions: The Iron Age, Hellenistic and Early Roman Period in Area II

All 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

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; Vieweger – 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; Häser – Schmidt 2019; Soennecken – Leiverkus 2021; Schmidt 2021.

7 For an overview of publications see www.tallziraa.de.

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.

The exhibition ‘Tall Zirā‘a - Mirror of Jordan’s History’ presented in the Jordan Museum in Amman and the Museum of Jordanian Heritage in Irbid in 2019 and 2020 highlighted various results of the excavations of this important site. An accompanying catalogue with introductory chapters and descriptions of all exhibited finds has been published as well⁸.

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 Zira‘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.

ACKNOWLEDGEMENTS

Both the present Volume 4 and the precedent Volume 3 are largely based on my doctoral thesis from 2017⁹.

Neither the doctoral thesis nor the resulting two volumes could have been accomplished without the backing from a brilliant team, who gave me outstanding support in all aspects imaginable during the formation process.

Above all, I would like to express my most heartfelt thanks to Prof. Dr. Dr. Dr. h.c. Dieter Vieweger and Assist.-Prof. Dr. Jutta Häser, the two leading excavation directors of the Tall Zirā'a project, for providing unlimited access to the excavation material and trusting me with the evaluation of Strata 16 to 9.

I would also like to thank Assist.-Prof. Dr. Jutta Häser and Prof. Dr. Armin Eich, my supervisor from the Bergische Universität Wuppertal, for their patient, discriminating, and time-consuming supervision.

The German Protestant Institute with its institutions both in Jerusalem and Amman as well as the Biblical Archaeological Institute Wuppertal gave me the opportunity to excavate on the tall, access to their various libraries, and authority to handle the material. I am also grateful to the cooperation partners of these institutions, of whose varied support I also benefitted—naming them individually would go beyond the scope of this preface (for a detailed listing, see Vol. 1 of the final publication).

A large number of individuals have contributed small pieces to the finished mosaic. Each of them has given me substantial support as well as constructive criticism, and I am very grateful for having experienced this measure of collegiality. In particular, I would like to thank:

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This thesis is only a small piece of a large jigsaw

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puzzle that is still missing many additional pieces. Some of them are already there, others are still in the process of development. Only if the many experts in different fields cooperate and combine their knowledge, will a clearer picture of the history of Tall Zirā'a emerge. I am grateful for having been able to contribute a piece to this puzzle.

K. Soennecken, Wuppertal/Jerusalem 2022

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INTRODUCTION

by K. Soennecken

Iron Age I, Iron Age IIA/B, Iron Age IIC and Persian Period (Strata 13–9)

The present volume is the fourth in a series of nine planned volumes of the final report about the excavations on Tall Zirā‘a carried out by D. Vieweger

and J. Häser. It will provide the results of the investigations of the Iron Age and Persian Period, i.e. the Strata 13–9.



Fig. 0.4 General plan of the site with excavation areas (Source: BAI/GPIA).

So far on Tall Zirā‘a, three areas (I–III) have been opened, all serving different aims. In Area I we explored residential areas, specifically the living quarters and working areas of the tall’s artisans. In Area II we focused primarily on administrative buildings, and in Area III on a prestigious building from the (Roman-)Byzantine era. The Iron Age Strata were reached only in Area I on Tall Zirā‘a.—Only the Iron Age IIC and Persian Period were reached in Area II.

Stratum	Temporal Classification	Area I	Area II
14 a	LB II 1st phase	x	/
13	IA I	x	/
12	IA II A/B older	x	/
11	IA II A/B younger	x	/
10	IA II C	x	x
9	Persian Period	x	x

Tab. 0.1 Overview of Strata 14 a–10.