“LIKE A SNAKE IN DIFFICULT MOUNTAINS”: A HISTORICAL AND ARCHAEOLOGICAL ANALYSIS OF THE CHARACTER AND ORIGIN OF THE IRON AGE KINGDOM OF MUṢAṢIR

Marshall Wheeler Schurtz

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For my parents, LuAnne and Carl, for making all my dreams possible

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As I sit down to write these acknowledgments and reflect on my nine-year journey at the University of Pennsylvania and fourteen years of archaeological study, I am struck by the vast and caring community that supported me over these years. While my name is at the head of this document, it would not be possible without the direct and indirect assistance of the following individuals as well as many more unnamed ones. So few are granted the opportunity to pursue their dream, and I am beyond fortunate that my pursuit included so many phenomenal people.

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me to challenge my assumptions and the assumptions of our discipline. His teachings have forever altered my perspective on how to view the world and how people shape it.

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Everyone who completes the process of writing and defending a dissertation knows the sense of isolation that accompanies the late nights in the library and long hours staring at the blank page. I feel most fortunate to have had a community of friends outside of my academic pursuits that kept me grounded and reminded me of the joy in the world. Thanks to Allie, Soumya, YoungJae, Daniel, Joseph, Lex, Austin, and Brian for their lifelong friendship and proof that my unfiltered self is always enough. Thanks to Cat, Morgan, Anna, Laurin for late-night college chats and raucous commencement cheers. Thanks to Bridgid, Ashley, Caitlin, Justin, and Dasha for letting me into their animal house and showing me a different way to be a student. Thanks to Mike, Adara, Aviva, and Ben for helping Philadelphia feel like the home it has become. Thanks to Jamaal, Trung, Francesca, Alyssa, Mike, Mandy, Mike, Dre, Meg for showing me that new friendships can take some lifting but are worth the effort.

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I began my time at Penn as a wide-eyed twenty-two-year-old who did not know enough to know how much I did not know. I leave as a slightly grizzled thirty-one-year-old with a mind full of information about the Ancient Near East and excited to write my next proverbial chapter. These are not merely acknowledgments of this publication but an acknowledgment of the people who helped make me into the person I am today. To all of you, know that you always have my deepest, most sincere gratitude.

ABSTRACT

"LIKE A SNAKE IN DIFFICULT MOUNTAINS": A HISTORICAL AND ARCHAEOLOGICAL ANALYSIS OF THE CHARACTER AND ORIGIN OF THE IRON AGE KINGDOM OF MUṢAṢIR

Marshall Wheeler Schurtz

Richard L. Zettler

Small polities of marginal borderland regions in the Near East were often pushed and pulled by their far larger neighbors' political and economic spheres, forced to adapt to their social and environmental situation to thrive and maintain independence. The kingdom of Muṣaṣir, the home to the chief Urartian deity, Ḫaldi, lay in one of these frontier zones in the rugged mountains of northeast Iraq. Despite the significance of the kingdom's temple for the Urartian kings' religious ideology, the steep peaks and narrow flatlands of Muṣaṣir's environs were ill-suited to substantial occupation. In order to locate Muṣaṣir and better understand the settlement behaviors of ancient occupation in the Sidekan subdistrict of Erbil, Iraq, the Rowanduz Archaeological Program (RAP) commenced a series of excavations and a survey in 2013. Excavation of the rural homestead of Gund-i Topzawa provided a dataset to investigate the reasons for settlement in this marginal environment. Synchronizing archaeological data to the Middle Iron Age (1050-550 BCE) Neo-Assyrian campaign texts and illustrations led to broader research questions exploring the factors driving the region's chronologically limited sedentary occupation and the impact coopting a religious system has on the local polity and its appropriators.

This study publishes the ceramic typology, stratigraphic, and architectural findings from the excavations of Gund-i Topzawa and Sidekan Bank, as well as the collected pottery and occupation qualities of surveyed sites in the Sidekan subdistrict (2014-2016). The pottery sequence, structural characteristics, and settlement patterns added to the understanding of the chronological sequence of the northern Zagros Mountains and further confirmed the locational specificity of Muṣaṣir with the Ḫaldi temple's likely location at Mudjesir. Modeling the Iron Age populace's ecological adaptations to environmental, social, and political stimuli indicate the interaction of cultural and technology factors first spurred Sidekan's sedentary occupation in the Late Bronze Age, and the later cooption of Ḫaldi by the Urartian kings led to the area's subsequent stagnation and contraction as the god's appropriators declined.

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LIST OF ABBREVIATIONS

CAD	1956-2010. *The Assyrian Dictionary of the Oriential Institute of the University of Chicago*. 21 vols. Chicago.
CTU	Salvini, Mirjo. 2008. *Corpus Dei Testi Urartei*. Roma: CNR.
RINAP 2	Frame, Grant. 2020. *The Royal Inscriptions of Sargon II, King of Assyria (721–705 BC)*. University Park, Pennsylvania: Eisenbrauns.
RIMA 1	Grayson, A.K. 1987. *Assyrian Rulers of the Third and Second Millennia BC (to 1115 BC)*. University of Toronto Press.
RIMA 2	Grayson, A.K. 1991. *Assyrian Rulers of the Early First Millennium BC I (1114-859)*. University of Toronto Press.
RIMA 3	Grayson, A.K. 2016. *Assyrian Rulers of the Early First Millennium BC II (858-745 BC)*. *Assyrian Rulers of the Early First Millennium BC II (858-745 BC)*. University of Toronto Press.
SAA 1	Simola, Parpola. 1987. *The correspondence of Sargon II. Part I, Letters from Assyria and the West*. Helsinki University Press.
SAA 5	Reade, Julian E, Giovanni Lanfranchi, and Simo Parpola. 1990. *The correspondence of Sargon II. Part II, Letters from the Northern and Northeastern provinces*. Helsinki University Press.
SH 1	Eidem, Jesper, and Jørgen Laessøe. 2001. *The Shemshāra Archives 1: The Letters*. Kongelige Danske Videnskabernes Selskab.
SgAnn	Fuchs, Andreas. 1994. *Die Inschriften Sargons II. Aus Khorsabad*. 1. Cuvillier Verlag.

Chapter 1 : Introduction & Geographical Background

In the century and a half since Assyriologists first translated cuneiform texts and began unraveling the mysteries of Mesopotamia's past, archaeologists have embarked on relentless hunts to link the toponyms of historical texts to the region's built environment. Although anthropological archaeologists supplanted the swashbuckling explorers of generations and investigated theoretical questions like transhumanism, occupation patterns, migratory dynamics, among many others, Near Eastern archaeology's continuing utilization of detailed cuneiform records for synchronizations between texts and archaeological sites provides a multi-angled perspective in the analysis of behaviors associated with the material record. Specifically, the amalgamation of material and epigraphic research offers insights into the organizational structures of political entities and how they yielded power. This project's quest to find Muṣaṣir, a mountainous, religious cult center assailed and revered by Urartu and Assyria, the major empires of the Middle Iron Age (1050-550 BCE), led to broader research questions exploring the factors driving a region's chronologically limited sedentary occupation and the impact coopting a religious system has on the local polity and its appropriators. New archaeological evidence from the Sidekan subdistrict of northeastern Iraqi Kurdistan explicated in this dissertation underpins the investigation of the settlement determinants inducing marginal borderland growth and how Muṣaṣir's cult center affected the trajectory of its settlement development.

Muṣaṣir, the political entity at the heart of this study, was home to the main temple of the god Ḫaldi, the head of the Urartian pantheon (Lehmann-Haupt 1917; Boehmer and Fenner 1973; Boehmer 1997; Radner 2012). In 714 BCE, the Neo-Assyrian king Sargon II memorialized a campaign against the Urartian king Rusa in a uniquely long literary Letter to Aššurthat concludes in the sack of Musair's Ḫaldi temple (Thureau-Dangin 1912; Zimansky 1990; Frame 2020, 271-275). At Sargon II's palace of Khorsabad, a series of detailed wall reliefs commemorated this accomplishment, illustrating the Assyrian forces carrying away enormous quantities of fine goods as booty (Botta 1849, pl. 141; Albenda 1986, pl. 133). However, Sargon II's lengthy itinerary did not divulge the kingdom's[1] exact location. Simultaneous with the rise of the Neo-Assyrian empire, Urartian kings erected monumental stone inscriptions dedicated to Ḫaldi, their royal god, and emphasized the importance of Muṣaṣir (Urartian Ardini). Two of those stone inscriptions, the Kelishin and Topzawa stelae, were placed in the Sidekan subdistrict of Iraq, containing references of monarchs traveling to Muṣaṣir. Guided by the reference to the polity in the inscriptions, Rainer Michael Boehmer (1973; Boehmer and Fenner 1973) traveled to the village of Mudjesir in Sidekan in 1971 and 1973 to conduct

[1] Usage of the term "kingdom" is not indicative of any anthropological or organizational threshold for states but a literal descriptor borne from the texts. The cuneiform texts that form the largest corpus of knowledge concerning the toponym use two writing conventions that lead to describing Musasir as a kingdom. One, is the logogram KUR, used in both Assyrian and Urartian in describing a land. The Akkadian word, *mātu*, can refer to a political unit or a physical land but does not necessarily make a qualification about the type of political unit. Another related logogram, URU, refers to a city, Akkadian *ālu*. The other logogram is LUGAL, the bilingual sign for king, *šarru* in Assyrian.
While Assyrian royal texts and most of their royal correspondence do not use the LUGAL determinative for the ruler of Musasir, Urzana, at least one letter uses the title. Urzana himself grants himself the linguistic titulary of kingship on one of his seals. On it, the text uses both the logogram LUGAL and KUR to describe Urzana as literally the king of the land Musasir (Collon 1994). Urartian texts, meanwhile, do not use either the LUGAL or MAN royal determinative for Urzana. Assyrian texts alternate between use of URU and KUR in describing Musasir, even using both determinatives in a single text. Urartian texts use only the city determinative URU for both the Urartian name, Ardini, and Assyrian name, Musasir.

a brief survey during a short break in political upheaval in Iraq. The Urartian characteristics of the observed archaeological material and linguistic similarities led him to postulate Mudjesir as the core of Muṣaṣir. Subsequent reconstructions of Muṣaṣir's location generally agree with the Sidekan area and believe Mudjesir is a likely candidate as the urban core of the polity (Radner 2012, 253).

In 2013, the Kurdish Regional Government's (KRG) General Directorate of Antiquities granted the Rowanduz Archaeological Program (RAP) a five-year permit for excavation of the mounded site of Gird-i Dasht on the Diana Plain and survey in Sidekan, Diana, and Rowanduz subdistricts of the Erbil province in Iraq. The project was headed by Director Dr. Michael D. Danti, with Assistant Director Richard L. Zettler and significant assistance from the Director of Soran's Directorate of Antiquities, Abdulwahab Suleiman. Among the research objectives were expanding the information regarding the chronological sequence of this understudied portion of the Zagros Mountains, understanding the development of the region's agricultural processes, and further research into Muṣaṣir's exact location. In 2013, due to the exposure of at-risk archaeological sites in Sidekan, the scope of excavation expanded to include the sites of Gund-i Topzawa, Ghaberstan-i Topzawa, Sidekan Bank, and Mudjesir. A large construction project for a road widening operation revealed Gund-i Topzawa, a series of burnt structures parallel to the road a few kilometers east of the Topzawa Stele findspot. Concurrent with the excavations, I headed a survey project of Sidekan in 2013, 2014, and 2016. Ceramics from the Mudjesir and Gund-i Topzawa excavations, along with results

from the survey, further reinforce Boehmer's conclusion that Mudjesir was the home of Ḫaldi's temple in Muṣaṣir.

With abundant archaeological data and historical synchronizations, the dissertation research embarked on a multi-scalar and multi-millennia overview of Sidekan's history, with a particular focus on confirming the proposed location of Muṣaṣir at Mudjesir. The process of investigating the history of Sidekan predating and succeeding Muṣaṣir, searching for the names of this minor geographic region, yielded few relevant toponyms. Parallel analysis of the archaeological material and survey resulted in an analogous situation, with Muṣaṣir's material culture disproportionately represented. This project's first major research goal is to confirm the validity of Muṣaṣir's apparent chronological climax and determine the possible factors behind this phenomenon.

A related research question is why settlements arose in this difficult, marginal mountainous area. Regardless of the longevity of Sidekan's major occupation, at Muṣaṣir's height, it was an influential kingdom worthy of reverence and militaristic assaults. On initial examination, the Sidekan valley system has favorable conditions for settlements, like ample rainfall and numerous perennial waterways. However, the mountainous character of the environment severely curtails the amount of arable land for agriculture and restricts movement through the steep valleys. To the Sidekan's east, the highest peaks of the Zagros Mountain, *chaine magistrale,* form imposing barriers to the vast agricultural basin surrounding Lake Urmia.

The Sidekan subdistrict's dual favorable and difficult environmental conditions lead to the question of defining marginality. While often used in discussions of

archaeological populations and settlements, the term is often used as a "fuzzy catchall" for a multitude of ecological, political, economic, and social factors, serving as a signifier of a challenging habitation environment (Mills and Coles 1998, vii). Its complexity and interrelationship have led many to push back against the use of the terminology without fully explicating the "idea in relation to a particular economic and social system" (Brown et al. 1998, 14; Turner and Young 2007). However, despite the complexity inherent in discussions using the terminology, three concepts of marginality interact with each other. As defined by Blaikie and Brookfield (1987, 19-23), the three concepts of marginality are economic, ecological, and political-economic. Economic marginality defines a marginal "unit" as "that last unit which when brought into use yields exactly its own cost and no more." Ecological marginality is where a unit of land will "just permit" the plant or animal to survive, but when accounting for environmental variability is defined as a unit where there is an "expected killing stress, but over which a plant can expand when that stress is absent." While political-economic marginality is less well defined, it can either refer to a spatial marginality, where the concentration of labor and capital in central zones leads to stagnation or contraction of the supplying areas, or societal marginality, referring to people outside the dominant political system or class.

Despite the delineation of the three concepts of marginality, rarely does one force act independently on the development of settlement and civilization. For example, Blaikie and Brookfield (1987, 23) present the example of where a dominant class causes a weaker, politically-economically marginalized class to utilize less fertile ground, forcing usage of more economically marginal land. As the population uses the land more

intensively, it causes the land to degrade to the point of ecological marginality. Further, the example demonstrates that marginality is a dynamic characteristic, changing over time. The complex interrelationship of marginal factors leads archaeologists like Turner and Young (2007) to advocate for a specific and contextually determined use and definition of marginality. Despite the ecologically difficult conditions of the highlands of the Sidekan subdistrict, this study primarily focuses on moderately productive rain-fed valleys around the modern town of Sidekan and uses the economic definition of marginality. Ecological marginality is used as a comparative concept to the ecological systems of neighboring regions. Further, while this area's geographic isolation often placed it at the spatial limits of political systems, its isolation is viewed as an economic measure, where travel is the primary cost for a marginal unit. With that context, the second objective of this dissertation is determining the reasons for settlement in this valley system and how occupants chose to utilize the environment, drawing on the theoretical framework of settlement ecology first coined by Glenn Stone (1996).

The fortuitous connection of historical, pictorial, and archaeological data concerning Muṣaṣir and Ḫaldi's cult center enables investigations into the origin of a local religious system and its complicated symbiotic relationship to its hegemonic protectors. Urartu's early history and questions of its ruling ideology remain obfuscated by a dearth of excavated material from the empire's formative years and a textual record that only begins during the expansionary phase of development (Kroll et al. 2012). Ḫaldi's exaltation by the Urartians and the Neo-Assyrian respect for the religious cult demonstrate the importance of the small kingdom's deity in the machinations of Iron Age

politics. While understanding the local perspective of how a regional god grew into a transnational symbol could answer broader questions concerning other religions' development, this study does not delve into the complicated cross-cultural theological comparative studies. The final objective of this project studies the historical and archaeological evidence of the Ḫaldi temple in a search for the origin of the god and his impact on the political and ideological development of Urartu.

The following structure of the dissertation investigates these three research questions. Chapters 1, 2, and 3 provide the geographical, historical, and existing archaeological context for studying new data from Sidekan. Chapter 4 reports the new RAP excavations in Sidekan, including the full site report of unpublished Gund-i Topzawa excavations and the associated pottery typology (Appendix A contains the complete documentation of ceramic types). Chapter 5 details the unpublished survey data of Sidekan, as well as referencing RAP's limited excavations of Mudjesir. Chapter 6 focuses on the landscape of Sidekan, using the theoretical positioning of settlement ecology to model possible factors leading to the area's initial sedentism and analyze the land use patterns associated with excavations. Chapter 7 concludes by synthesizing the aggregated data to provide possible interpretations of the religious architecture in Muṣaṣir and how Ḫaldi's worship transformed the trajectory of Sidekan's occupation.

Geographical Background

The geography and topography of the Soran district of northeastern Iraq, sandwiched between the highlands of the Iranian and Turkish borders to the east and north and the rolling hills of the Erbil plains to the west, is the defining feature in any study of Sidekan's history and archaeology. Its rough topography limited scholars' access to the area for centuries, contributing to its relative mystery in the academic record. The surrounding mountains were also crucial factors in the civilizations and settlements that arose there, without massive mounded cities like those that define the neighboring societies. Isolation from neighbors is the main thread that connects millennia of occupation in this area; a handful of steep and narrow passes present the only routes in and out of the region. The historical and archaeological background of the Soran district, including Sidekan, Choman, and Mergasur, is incomplete without a complete understanding of the geographic and topographical context.

Defining the clear western edge of the Soran district is the largely impregnable Baradost Mountain. Less of a single peak than a long continuous mountain range, the mountain runs roughly 40 km NW-SE, with only two or three small passes. While not wholly impassable, the steep western slopes of the Baradost prevented the movement of large military forces in antiquity, limiting treks over its peak to the most adventurous mountaineers. The most formidable of these passes is the Rowanduz Gorge, a vast gorge containing the Rowanduz River that cuts as deep as 600m in parts. The Balakyian, Handrin, and Rowanduz Rivers merge and cut through the soft stone of the Baradost

Mountain to create the main stretch of the Rowanduz Gorge. Millennia of travelers wrote awestruck tales of the gorge, taken aback by its size and the difficulty of crossing the ravine. Until the early 20th century, passage involved narrow trails along the gorge's base, accessible only in dry seasons when the river was at its lowest. Alternatively, travelers could depart from the town of Khalifan, ascending the steep sides of the Rowanduz Gorge, walking (or carefully accompanying a pack animal) along narrow paths, before crossing a "deeply cut ravine" to reach Rowanduz (John Murray (Firm) and Wilson 1895, 321–22).

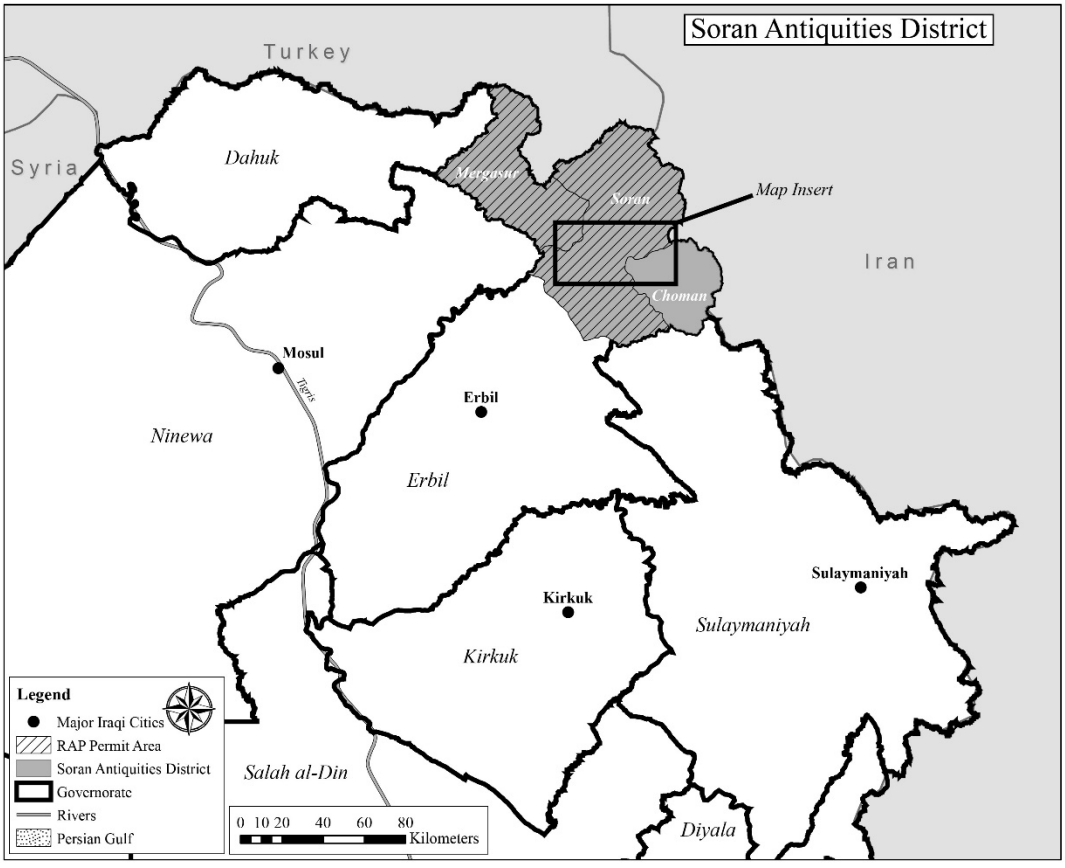


Figure 1.1: Map of the District of Soran and Iraqi Provinces

In 1929, A.M. Hamilton, an engineer working on behalf of the British Administration, constructed a road through the gorge, making the passage of cars and other large vehicles possible for the first time in recorded history (Hamilton 1937). Before the road's construction, many travelers traveled over the Bejan Pass, a slightly less steep part of the Baradost Mountain, south of the Rowanduz Gorge, and near the peak of Korek. Snaking up the western slope of the Baradost, one would pass over Bejan and descend steeply down the eastern side, arriving south of the city of Rowanduz (Lyon 2002, 123; Division 2014, 105). This route, from 18th-century accounts, was apparently the most common path over the mountain. A British handbook of routes in the region notes not only the Bejan path but an alternative to the south. The guide records that during an earlier Kurdish rebellion against the Ottoman rulers, a small detachment of soldiers headed to Rowanduz by an alternative route. This path involved traveling northwards from Rania along the Serkupkan River, over a small pass near Betirkhen Mountain, and along the Handrin Dagh (Division 1917). Travelers' accounts and academic publications rarely document this north-south connection, but this path would have been a vital transportation route for travel to the Rania Plain, as the alternatives involve detours that at least double the length and time of the journey. For a journey from the Iraqi plains into the Sidekan highlands, however, this north-south route was far less practical.

For centuries, Rowanduz was the most noteworthy city in the Soran district, renown today and in the past for its breathtaking location wedged on a high cliffside overlooking the eponymous Rowanduz River, running down from the high peaks of the

Zagros Mountains to the east, and from the Handrin River to the south. Today, the sprawling city of Soran is far larger than Rowanduz, driven by an influx of Kurdish refugees in the 1990s and economic development in the early 2000s. In 2018, Soran's developed area was approximately 15 km^2, while Rowanduz was less than 1.5 km^2 (Hamad 2020). Despite this, Rowanduz remains a prominent location, physically and in terms of cultural importance. At Rowanduz, the Handrin and Rowanduz Rivers combine, flowing west, as they merge with the Balakyian River coming from the north, as more water springs from the raging Bekhal waterfall in the mountain. The waters continue through the gorge until they combine with the Alana Su River, which flows westerly from Khalifan into the canyon. At this confluence, near the famous Gali Ali Beg waterfall, the rivers join and head north, winding along the western edge of the Rowanduz Gorge and eventually becoming the Upper Zab River (Levine 1973, 7–10).

Rowanduz's position perched on the high cliffs above the river not only bestowed the town sweeping vistas of the surrounding area and notoriety, but its location granted the town control over much of the travel in the region. To the north of Rowanduz is the Diana Plain, an area of about 6 x 12 km that makes up the only broad and somewhat continuous agricultural plain in the Soran district, framed on each side by major topographic features. The Rowanduz River and Handrin Mountain form the southern boundary. To the west is the Baradost Mountain, with the Balikian River running alongside the range's eastern slopes before cutting northwest into the mountains. To the east and north are the Hassan Beg Mountain and the rising peaks of the Zagros behind it, constraining the plain. Recent construction around the sprawling city of Soran destroyed

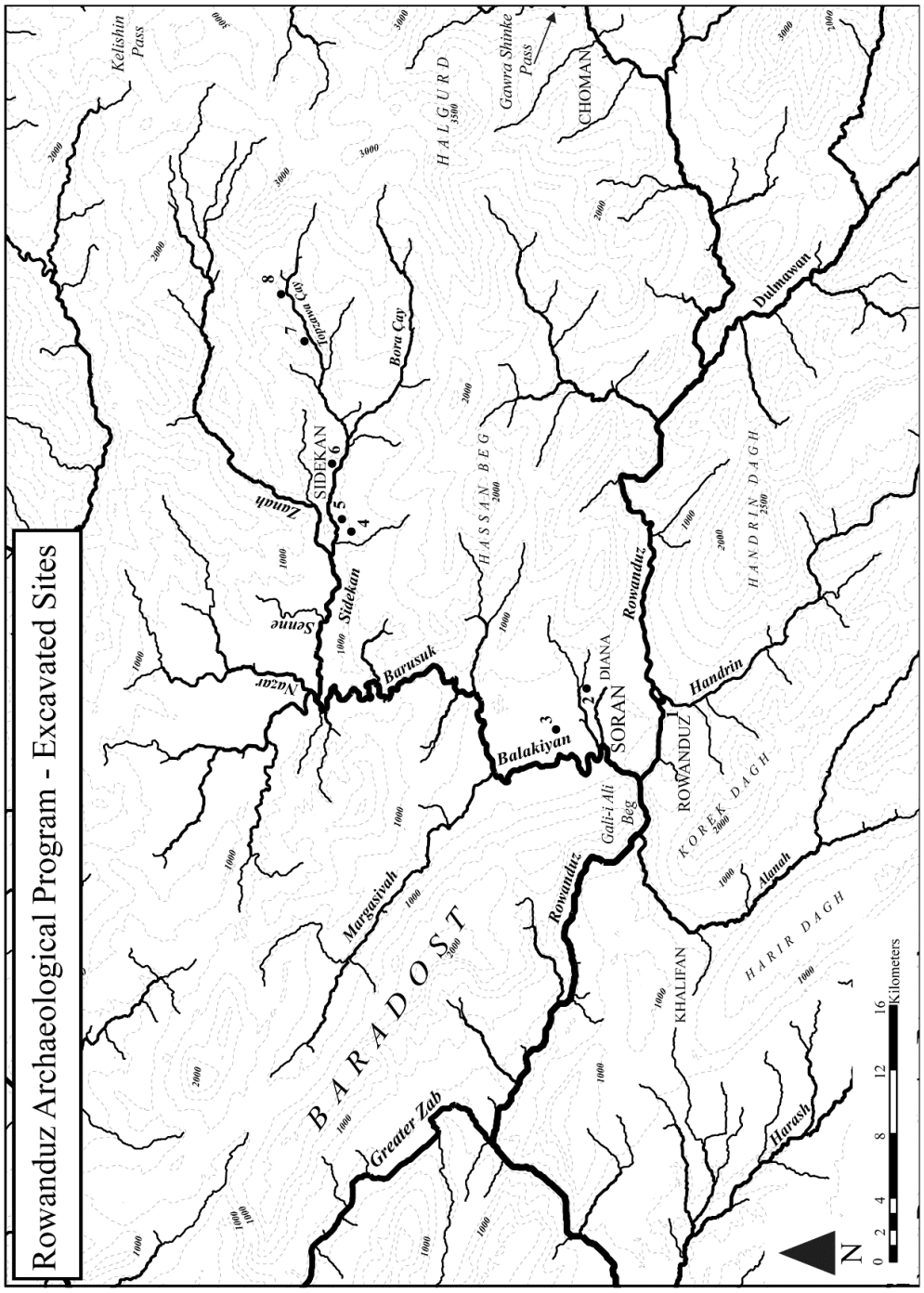
much of the unused land while maintaining much of the farmland in the center of the plain (Hamad 2020). A major transportation artery and catalyst for growth is the Soran-Sidekan Road, which runs roughly north-south on the eastern side of the plain. As the population of Soran grows, the new construction follows this road northwards. Most of the remaining land reserved for agriculture and pastoralism is on the plain to the west, along the Balikian River.

The combined administrative district of Soran contains the Sidekan, Khalifan, Rowanduz, and Diana subdistricts, with a total population of over 200,000 in 2015, primarily centered around the city of Soran. Subsumed in this quasi metropolis is the far older settlement of Diana, the namesake of the plain, the subdistrict, and the home of Christian and Jewish population for centuries (Hamilton 1937, 64; Zaken 2007, 168–69). Today, Diana is effectively a part of Soran, as the city's limits and growth extend past Diana's limits. Surrounding the core of the Diana Plain and Rowanduz are three primary regions: the districts of Mergasur and Choman, to the northwest and east, respectively, and the Sorani subdistrict of Sidekan to the northeast.

The Mergasur District is, topographically, the most accessible from Rowanduz and Soran and, unlike Sidekan and Choman, has independent connections to the Iraqi plains by northern passes. Despite its accessibility from the Diana Plain, the area traditionally formed stronger connections to the Mesopotamian Plains than its Sorani neighbor, due in large part to a pass through the Baradost along the Shanidar River and another passage farther north along the Rukuchuk Gorge, which divides the Baradost from Shirin Mountain to the northwest (Solecki 1979; Division 2014). The main route

from Soran to Mergasur is the eponymous Mergasur Valley, which winds along the headwater of the Balikian River, ranging from .5 km to 1 km wide along the river. This route is one of the only easily accessible paths north from Soran into the mountains around Barzan and the Turkish border.

The small eponymous town of Mergasur is roughly 30 km to the northwest of Rowanduz, in the center of the valley. Southeast of the town is the Shanidar Pass, one of the only other passes through the Baradost Mountains. Its use as a route into and out of the mountains is demonstrated not only by modern roads but the existence of Neanderthal occupation at the famous Shanidar Cave, located on the western slopes of the pass (Chapter 3). The northern extent of Mergasur is roughly where the Upper Zab River turns 90-degrees and becomes the Rukuchuk Gorge, near the modern town of Barzan. Further upstream are the headwaters of the Upper Zab River and the border between modern Iraq and Turkey. The Rukuchuk River runs northeast towards the Turkish border, combining with the Shakiv, Kwakura, and Rubar Haji Beg Rivers, forming the modern border between Turkey and Iraq.



1 (Qalat Lokan), 2 (Banahilk), 3 (Gird-i Dasht), 4 (Qalat Mudjesir), 5 (Mudjesir), 6 (Sidekan Bank), 7 (Gund-i Topzawa), 8 (Ghabrestan-i Topzawa)

Figure 1.2: Map of Rowanduz Archaeological Program Project Area

Another of the districts surrounding Soran is Choman, located east between the Diana Plain and the Iranian border. Choman is a notably mountainous region, with the main occupation areas surrounding the Berserini River, a tributary of the Rowanduz

River. Following this river east through the twists and turns of the mountain in the Berserini Gorge leads one to the high peaks of the Zagros Mountains and the Gawra Shinke Pass, located on the border between Iraq and Iran. At the border crossing is the modern town of Hajji Omran, which sees the flow of a large percentage of the goods that move between Iran and Iraqi Kurdistan. The main road from the pass runs along the river before ending up near Soran and combining into the major road that goes through the Rowanduz Gorge. Choman's mountains are high and filled with caves, many of which contain archaeological remains, like the Iron Age storage cave of Bokadera (Chapter 3). To the south, the vast Qandil Mountains divide the Soran area from the Rania Plain. The Qandil Mountains are effectively inaccessible – only small passes without arterial roads connect these two regions.

The Sidekan subdistrict is in the northeastern corner of Soran district, with Turkey to the north and Iran to the east. The northern and eastern borders of the subdistrict lie along harsh mountain ranges, containing only a handful of small passes, and the southern connection to Soran, with similarly difficult passes. These mountainous borders isolate the Sidekan area and are the most crucial feature of Sidekan's geography. The Shaikh Kiran (1750 m above sea level (a.s.l.)), Hassan Beg (2500 m a.s.l.), and Halgurd (3500 m a.s.l.) mountains are the highest peaks in a range that runs east-west and divides Sidekan from Soran to the south. To the east are the high peaks of the Zagros Mountains, the so-called *chaine magistrale,* the highest point in the range that delineates not just Iraq and Iran but the two country's watersheds. These peaks are largely over 3000m a.s.l. and contain only a few passes between Iraq and Iran, the most accessible of which is the

Kelishin Pass. On the other side of the Zagros Mountains is Lake Urmia and the vast flat and fertile plains surrounding the lake. To the north of Sidekan, the border between Iraq and Turkey is even more impassable. Much of the southern border of Turkey contains the Taurus Mountains, as impregnable as the Zagros Mountains. In the southeast of Turkey, the Taurus Mountains crash into the Zagros range, creating a vast expanse of steep and dangerous mountains. Sidekan's northern border is roughly aligned with this point of the Taurus Mountains, making passage north all but impossible. Adding further difficulty, the headwaters of the Upper Zab River form a small gorge, running east-west across much of the subdistrict.

Traveling north from Soran to Sidekan is treacherous because of the steep mountains dividing the areas. Modern technology facilitated the construction of a more direct paved route, produced using powerful construction equipment to cut wide pathways and switchbacks along the side of the mountain. The contemporary road from Soran heads north along the eastern edge of the Diana Plain and turns northeast into the mountains at the northern end of the plain. From there, at the village of Shaikhan (750m a.s.l), the road begins switchbacking along the southern slope of the mountain range, quickly rising over one of the lowest points in the range at 1450m a.s.l. At this point, the road divides. One route heads further up the mountain range to the peak of Hassan Beg, over a thousand meters above, while the other begins the descent downwards into the Sidekan basin. The northern slope of the high range dividing Sidekan and Soran consists of undulating hills, providing a far gentler descent over the roughly five hundred meters to Sidekan than the opposite side's ascent. Modern construction equipment aided in

creating a mostly straight path towards the town, but evidence of earlier paths indicates the pre-modern road followed the general direction.

Before the construction of the new road originating from Shaikhan, transportation into Sidekan was far more difficult. Accounts by Jewish residents in Diana suggest that even before modern road construction, travelers took this route and walked on narrow pathways, dangerously perched high above the valley floor (Zaken 2007). Another road, more commonly utilized in the past, followed the Barusk River to reach Sidekan. The "so-called" Old Sidekan Road, used by the archaeologist Boehmer in the 1970s to access Sidekan, remains a single-lane dirt path (Boehmer and Fenner 1973). Access to this path begins north of the Diana Plain and Balakiyan River, along the road to Mergasur. This road eventually heads north to Turkey but passes Shaikh Kiran Mountain on its route north. At the bend of the Barusk River is a village situated at a ford (Discussed in Survey - RAP45). The Old Road begins here and winds along the river until reaching the Sidekan Basin. In addition to Boehmer's account of traveling along this road, the sides of the route are heavily mined from the Iran-Iraq War, denoting its continuing importance as late as the 1980s.

Following either road, one reaches the Sidekan Basin, roughly described as the wide valley east of the town of Sidekan, bounded by high mountains on all sides. In the recent past, specifically during the British Occupation, the Sidekan River and the Sidekan Basin were known as the Dubor River and the Dubor Basin (Kenneth 1919). At approximately 1000m a.s.l. (compared to Soran's elevation of 600 a.s.l.), one reaches modern Sidekan. The town today consists of two parts, the original section to the east and

the newer section to the west, called Mohammad Barusk, laid out on a grid. Given the location of the administrative offices of Sidekan in Mohammad Barusk, these sister cities are considered the town of Sidekan.

The Sidekan River is nearby the town of the same name, at the junction of Topzawa Çay and Bora Çay Rivers.[2] As the Sidekan River flows west, it picks up water flow from the Zanah River, becoming the Barusuk River. After its western journey, the river cuts dramatically to the south, winding through the steep mountains before debouching onto the Diana Plain. This turn is the origination point of the Old Sidekan Road and the ford. Many smaller rivers and streams flow down from the surrounding mountains to increase the flow of the Barusk River, creating a deep cut through the mountains of Shaikh Kiran to the west and Hassan Beg range to the east.

East of Sidekan lies the Kelishin Pass, the only navigable pass across the Zagros Mountains in this area and a landmark for any traveler through the area. Throughout history, the Kelishin Pass appeared as a central location for control of passage through the Zagros Mountains. The following historical background section repeatedly returns to the pass's role in much of the history of the area. There are two main routes to reach the pass from Sidekan: north and then east following the Zanah River or east and then northeast following the Topzawa Çay. Although the Zanah River permits passage to the pass, the route following the Topzawa Çay contains a modern road to the pass, recently paved and widened, and explorers' past accounts describe utilizing the original, narrow

[2] The rivers should more accurately be termed streams, though the waterflow is heavily dependent on season. For simplicity's sake, I describe both as rivers.

road. After about 20 km following the Topzawa Valley, the route cuts up into the mountains, following the somewhat rolling hillsides of the Zagros Mountains piedmont to the heights of the pass.

The valleys that make up the Sidekan Basin, as well as the Topzawa and Bora Valleys, are all relatively narrow, a maximum of 1 km across, with the only moderately sized flat expanse at the town of Sidekan and a much smaller area directly to the west at Mudjesir, a small village downstream from Sidekan. The sides of the Bora and Topzawa valleys are relatively steep and hundreds of meters high. The floors of the valleys are full of lush vegetation, while the slopes of the hills are comparatively bare, despite the heavy fall and winter rains. This dendritic system of valleys and rivers flow down from the high peaks of the Zagros Mountains.

Soran receives ca. 500-650 mm of rainfall annually, and Sidekan over 650-800 mm, providing more than adequate water for extensive agriculture (Noori, Pradhan, and Ajaj 2019). In the winter, snow is common in the town of Sidekan, and the surrounding peaks are topped by snow until at least April, though often still in May. Springs in Sidekan also add to the substantial watershed. This large amount of water in the region contributes to lush vegetation and productive agriculture. North of Sidekan and Mudjesir is a massive expanse, near the so-called Kani Resh area, unsurveyed and untraveled, that makes up more than half of the area of the Sidekan Sub-district (Rawlinson 1840, 26). While Kani Resh is largely uninhabited today, home to only a handful of small villages, early modern travelers' references to the area suggest a slightly more substantial occupation in the past. Due to the presence of the Kurdistan Workers Party (PKK) in the

area, the security situation has prevented travel there. Maps and satellite imagery attest, however, to a series of rolling hills, sparsely populated, with few farms or evidence for productive agriculture. Traveling from the town of Sidekan north, through this area, to the Turkish border is arduous and dangerous, even with modern technology. The journey, in antiquity, would have taken longer and come with more risks. In addition, this area contains no broad agricultural plains like that around Sidekan town or Mudjesir.

In the Sidekan area, the usable land is limited. Along the Sidekan River and its tributaries, the glacial plateau provides a limited amount of fertile agricultural land for locals' sustenance. Most of the riversides are narrow strips of relatively flat land before quickly sloping up into steep hills and mountains. A few locations, like at the settlements of Sidekan and Mudjesir, further down the river, lie on relatively broad flat plains that allow for agriculture and moderately sized towns. Towards the high mountains, in the area of Kani Resh, traditional agricultural land is limited. The name Kani Resh suggests an inhospitable region, as the Kurdish name translates to "black fountain" (Rawlinson 1840, 26). Compared to the area around Sidekan, upstream to its east as well as downstream to its west, the hills around Kani Resh seem devoid of any large villages or concentrated agriculture. In Rawlinson's travels through the area, however, he mentions that while this area is now the domain of the "Beradust" [Baradost] tribe and is home to only a few hundred families, in the past, the Sumai and Terkur tribes lived there with a much larger population (Rawlinson 1840, 26). The town of Kani Resh is now deserted, with only traces of the past architecture visible on satellite imagery, although a moderately sized town exists only a few kilometers away. This abandonment provides a

reminder that the currently observed settlement patterns may not reflect the past occupation, and the dataset is biased with satellite imagery. Specifically, modern and pre-modern conflict can force migration from villages, giving the often incorrect impression these areas were unoccupied. To the north, these mountains increase in size, with small passes, until one reaches the Turkish border with even more impenetrable mountains. As a whole, the Sidekan area's isolation defined its historical and present position and understanding the ways people adapted to this environment in the past informs the future.

Chapter 2 : Historical Background of Sidekan

The most notable historical occupation in the Sidekan area, and the focus of this dissertation, is the Iron Age kingdom of Muṣaṣir. Despite the millennia of human settlement in this region, the historical record is comparatively bare. Apart from a handful of rare inscriptions, the history of Soran comes from reports and tales of outside travelers, conquerors, and spies. While Sidekan is the primary focus of this analysis, Soran and Sidekan are inextricably linked throughout history as two small refuges in the largely inhospitable northern Zagros Mountains. Thus, the history of Soran is vital for understanding the annals of its smaller neighbor, Sidekan. Further, the dearth of historical texts from Sidekan and Soran themselves forces us to examine the history of Sidekan largely through the lens of outsiders, with only small archaeological and ecological clues revealing the identity of its occupants. In this limited historical dataset, the Iron Age kingdom of Muṣaṣir stands apart as one of the few periods of note.

Across history, Sidekan appears only periodically in direct and indirect references. While literature and historical documentation only began referencing the area as Sidekan in the last few centuries, a combination of geographic and historical triangulation reveals the region's identity throughout time. The dual geographic features of the Rowanduz Gorge and the Kelishin Pass provide immutable anchor points when using historical accounts to reconstruct the area. While the names of these features evolve over millennia, their unique characteristics provide a connection to the modern names. By

utilizing geographic clues, the existence of an inscription at the Kelishin Pass, and data from an archaeological survey of Sidekan by Rainer Michael Boehmer in the 1970s, scholars now believe that the core of Muṣaṣir was in the area of the modern Sidekan subdistrict (Boehmer and Fenner 1973). Urartu, the mountainous Iron Age empire to the north, with its capital of Tušpa at Lake Van, revered Muṣaṣir. According to contemporary texts, Muṣaṣir was home to the temple of Ḫaldi, the head deity of the Urartian pantheon, bestowing the kingdom prominence to the Urartian rulers (Çifçi 2017, 257). Apart from references to Muṣaṣir, historical documentation of the area is minimal.

Preceding the Iron Age and Muṣaṣir, textual accounts from nearby regions suggest a possible identification of the area as Kakmum, although that identity is far from certain. The relationship between the Bronze Age occupation and the Iron Age is important for establishing the origins of Muṣaṣir as well as the Urartian Empire and its rulers. After the Iron Age and the fall of Urartu, Sidekan's identity is far more obscure. Extrapolating from present names and geographical relationships indicates that a possible name of the area during the Classical Periods was Aniseni. This name appears periodically throughout history in reference to tribes or small sections of the area. After the Muslim Conquest, the area disappears from the historical record minus a few individual references to geographic features by travelers and geographers, noting the Kelishin Pass. Eventually, during the Ottoman rule, the Sorani Emirate arose, providing a concrete anchor to locate geographical polities around the core of the state, the Diana Plain. The name Sidekan does not occur as a noteworthy political entity during this time,

but traveler's accounts confirm continued occupation, albeit extremely limited and hostile to outsiders.

The overall history of the Sidekan region appears to begin with some occupation in the Late Bronze Age, before reaching its height and importance in the Iron Age, with neighboring empires and kings fighting to exert influence over the area. After Muṣaṣir's temple and Ḫaldi's fade into irrelevance, Sidekan shrinks and largely disappears from the historical record until after the Muslim conquest. History alone can not serve as evidence for the region's irrelevance for a millennium, but it does suggest that Muṣaṣir's role as a significant player in local geopolitics was short-lived. By combing the historical record and correlating periods of archaeological occupation, it becomes clear that Muṣaṣir's thriving kingdom was abnormal for the region. Overviewing the history provides a window into the settlement patterns of the Sidekan area and places the region into context with its larger neighbors.

Early Bronze Age

Understanding and identifying the possible polities located in the Soran district during the Bronze Age requires an overview of the major states and groups in the Trans-Tigridian corridor, utilizing their relative locations and outside references to identify this mountainous region. The possible identification of this area is Kakmum, determined by locating various toponyms on the map of the Trans-Tigridian valleys and Zagros Mountain piedmont. Although textual sources provide limited information about the inhabitants and settlement itself, the descriptions help determine the origins of the later

Iron Age state and establish the type of occupation in the area. Kakmum itself rarely appears in the textual records of the Mesopotamian plains and alluvium, but inscriptions from its better-known neighbor, Simurrum, note its importance in the machinations of the Trans-Tigridian potentates. Most of the key information about the mountain kingdoms comes from records of the larger Mesopotamian states throughout the Bronze Age, most notably the kings of the Ur III state.

Simurrum

A primary adversary and major source of textual information about Kakmum was the kingdom of Simurrum.[3] Locating Simurrum with precision is vital for the relative positioning of Kakmum. Simurrum appears in various textual sources from the 24th through 18th centuries BCE (Altaweel et al. 2012, 9). Early Dynastic kings boast of capturing the polity and describe its character as a place "between the basket and the boat" (Alster 1997, 84, 104). Sargon of Akkad and his successor Naram-Sin both campaigned against the kingdom, dedicating year names to their attacks on Simurrum (Frayne 1993, 96; 1997, 246). Later, a Gutian named Erridu-Pizir records a king of Simurrum named KA-Nišba instigating hostilities among his people and neighboring Lullubum against the ruling Gutians (Frayne 1993, 224). After the fall of Guti, king Šulgi of the resurgent Ur III dynasty engaged in five separate campaigns against Simurrum in year names 25, 26, 32, 44, and 45 (Ahmed 2012, 237). Hallo (1978, 72) postulates that Simurrum's vital location controlling routes between the Iranian plateau and

[3] Written as "Simurrum" in early references, but by Old Babylonian Period written as Šimurrum (Ahmed 2012, 230–31)

Mesopotamia drove Šulgi's apparent obsession with its conquest. The intensity of conflict led to him naming three of the years the "Hurrian wars" against Simurrum and nearby Karhar (Hallo 1978, 82). After the short period of Ur III rule over the area, a strong independent king of Simurrum rose to power, Iddin(n)-Sin, credited for controlling vast swaths of the Trans-Tigridian corridor and erecting monuments in his honor (Edzard 1957, 63; Walker 1985, 186-90; Whiting 1987, 22; Ahmed 2012, 220-275).

With attestations spanning the Early Dynastic Period to the Early Bronze Age, Simurrum serves as an anchor point for topographical names at the time. Although there is some debate over the exact location of the kingdom, most scholars agree on a general location east of the Tigris, in the valleys and semi-mountainous areas of the Trans-Tigridian corridor (Billerbeck 1898, 4; Meissner 1919; Forrer 1920; Gelb 1944, 57; Edzard 1957; Frayne 1997; Altaweel et al. 2012). The exact locations, however, have some variation. In the late 19th century, Billerbeck identified Simurrum and Zaban as the same localities, placing them on the Lower Zab River (Billerbeck 1898). Meissner then suggested a location near Kirkuk, mainly utilizing a Šulgi date-formula in which Simurrum and Lullubum are seemingly related and texts that conflate Simurrum with Zaban (Meissner 1919). Although multiple subsequent publications continued the identification with Zaban,[4] Forrer and Weidner disagreed and determined that the two topographical names were distinct (Forrer 1920; Weidner 1945). The two names may indeed refer to the same entity, but Simurrum is the earlier name while Zaban arises in

[4] Gelb 1944; Edzard 1957

the Old Babylonian period, possibly under Sillī-Sîn and Ilūnā of Ešnunna, indicated by an archive of texts from Mê-Turran (Frayne 1997).

More recent publications argue for different locations closer to the Mesopotamian plains or further into the Zagros Mountains. Frayne originally proposed a locale much farther south, specifically on the Sirwan River, near Kifri, at the site of Qalat Shirwana, using the relative positions of Simurrum and its neighbors as the predominant factor (Frayne 1997). As part of his argument, he noted the similarities between the modern Sirwan and Simurrum names and the substantial defensive location of the town (Frayne 1997, 267–68). However, in a later article, he changed his proposed location to northeast of the Darband-i Khan, specifically "the wide river basin west to the modern Av-i Tangero," (Frayne 2011, 511). Radner locates Simurrum in the Shahrizor, farther to the northwest, based on its fertility and natural defensive advantages, as well as the locations of rock reliefs and other topographic names (Altaweel et al. 2012, 9–11). The location of Mount Nišba, its identity known from later Assyrian sources as the Hewrman range, is of some importance for the kings of Simurrum and aides Radner's identification. The findspot of the recently published Halidany Inscription at the archaeological site of Rabana, on the slopes of the Pira Magrun Mountain, led Ahmed (2012, 293-95) to suggest the site as the temple to Nišba, on the mountain of the same name. Using that evidence, in part, he arrived at the same conclusion for the kingdom's location in the Shahrizor Plain, north of the Darband-i Khan Pass (Ahmed 2012).

Turukku

Simmurum's positioning and relationship with its neighbors assist in understanding the location and identity of another Bronze Age polity, Turukku. Inscriptions of Simurrum, from the time of Iddi(n)-Sin, and the Old Babylonian era archive at Tell Shemshara describe a large, confederated state of possible Hurrian ethnicity located in the mountains above Simurrum. Turukku is simultaneously the geographical name of a land and the designation for a group of foreigners. While deriving the toponymic positioning of Turukku compared to Simurrum and Kakmum advances the understanding of the political situation in northeastern Iraq during the Iron Age, their ethnic identity and organizational structure reveal characteristics directly relevant in the study of Iron Age Muṣaṣir and Urartu.

Turukku appears as an adversary and ally at different points in the letters from ancient Šušara (Tell Shemshara) and Iddi(n)-Sin's Jersusalem Inscription. The name occurs as a political entity and a description of a group of people. Letters between the major powers from Tell Shemshara report that Pišenden, a Turukkian king of the kingdom of Itabalḫum, attempts to enlist the kingdoms of Elam, Namri, and Nikum to join his struggle against Kakmum (Eidem and Laessøe 2001, 143–44). Another example, from Iddi(n)-Sin's Jerusalem Inscription, uses the toponym "Tiriukkinašwe," a word constructed from the ethnic term for the Turukku, Tirukku, and the Hurrian plural and genitive suffixes (Speiser 1941, 102, 108–9; Shaffer, Wasserman, and Seidl 2003, 26). In the cuneiform texts, this distinction between geography and ethnicity is often solved with determinatives for either a place or a group of people. Philologically, the determinative

"LÚ.MEŠ," indicating a collection of people, most often precedes the name Turukku (Ahmed 2012, 350). While the determinative logogram indicates the Turukku as a group of people, whether they were a separate and distinct ethnicity is a question, relying heavily on linguistic clues.

Durand (1998, 81) believes the ruling class of Turukku had an "undeniable" ethnic component, with a Semitic Amorite ruling class reigning over a Hurrian population. Much of Durand's argument relies on equating Turukku onomastics with comparable Akkadian words and their associated meanings, establishing a through-line between the Mesopotamian language and Turukkean terms. He equates Turukkean names with Akkadian translations, such as Turukkean Itabalḫum with Akkadian Ida-palḫum, translated as "flank of the terrible," Zazum as Sasaum, the Akkadian word for "moth," and Lidaya as Semitic Lidum, "offspring" (Durand 1998, 81). These interpretations are plausible except for a seal of Pišenden in which Itabalḫum is written without the "ḫi" suffix, the Hurrian adjectival suffix, indicating the Akkadian connection of the word was not reflected by the Turukku people (Speiser 1941, 114–15; Eidem and Moeller 1990).

The Amorite invasion into Mesopotamia and its periphery, which Durand (1998, 81) posits led to this Semitic group ruling over a Hurrian population called Turukku. Archaeological evidence may lend credence to this expansion if one associates pottery typologies with ethnicity, the infamous issue of pots and people. Khabur Ware, a ceramic type emblematic of the first half of the second millennium, spreads across Mesopotamia and into some surrounding regions. One of the most distant locations with significant Khabur Ware pottery is Dinkha Tepe in the Ushnu-Solduz Valley, located just west of

Lake Urmia (Oguchi 1997, 216). This area is in the general location of the Turukku and could indicate the spread of a Semitic ruling class onto the Iranian plateau, although archaeologists should be highly cautious assigning ethnic and linguistic characteristics to typological distinctions. Assuming some connection between the Khabur Ware ceramic assemblage, the presence of the pottery at Gird-i Dasht, on the Diana Plain (Chapter 3), provides circumstantial evidence for a connection between the site and this migration of people. However, the linguistic basis for an Amorite ruling class is minimal.

The rulers of Turukku were seemingly sufficiently powerful to leave a mark on the name of the ethnic group itself. Pišenden's seals describe his father as "Turukti, king of the land of Itabalḫum" (Eidem and Moeller 1990, 636). This seal's inscription and the similarities between names would seemingly indicate that Turukti was the progenitor of Turukku and its people, but one of Turukti's seals casts doubt on that interpretation. The seal describes Turukti as the son of Uštap-šarri, also a king of Itabalḫum (Eidem and Laessøe 2001, 26, 160). Further, a text of Yaḫdun-Lim, dating 15 years before the start of the Tell Shemshara Archives, cites a person named Tazigi as "king of the Turukku," eliminating the possibility of Turukti's founding of the dynasty (Eidem and Laessøe 2001, 26). In addition, the Jerusalem Inscription's toponymic amalgam of ethnicity and geography, Tiriukkinašwe, reinforces a character for the group extending beyond the royal titulary. Turukti's name may derive from the geographic and ethnic term rather than the inverse. Evidence for Turukku rulers continues through multiple generations, until at least Zaziya, a contemporary of Zimri-Lim at Mari (Beyer and Charpin 1990, 625).

Regardless of the ruling class's identity, the bulk of the Turukku population was apparently of Hurrian origin. Historically, the Hurrian language originated in the northwestern Zagros Mountains and spread to neighboring areas (Gelb 1944; Eidem and Laessøe 2001, 20; Zadok 2013, 5). Located near that core, the Hurrian influence on the Turukku is unsurprising. Eidem and Laessøe's characterization of Turukku as "a group of kingdoms in the valleys of the northwestern Zagros, predominantly of Hurrian affiliation," corresponds well with that interpretation (2001, 27). Despite the depiction of Turukku as comprised of dispersed groups, separated by geographic barriers, they do not appear to be primarily nomadic, contrasting some of the Mesopotamians' stereotypes of these types of mountain populations. Although the Mesopotamian authors' depiction of Turukku is of "very mobile guerilla groups waging mobile warfare," the Tell Shemshara archives depict a sedentary population (Eidem and Laessøe 2001, 25). Rather than nomadic populations moving around the Iranian plateau, the populace prefers the comfort of warm and permanent domiciles. In a letter from the Turukkeans found at Mari, the Turkku speak of their affinity to their homes and resentment in leaving them to travel into the mountains (Charpin and Durand 1987, 132–34).

Sedentary populations led to agglomerations of people into states and kingdoms, not dissimilar from the large polities known on the Mesopotamian plains. Indeed, in Eidem and Laessøe's analysis of Turukku through the lens of the correspondence at Tell Shemshara, the Turukkeans show evidence of "a fairly complex political organization in these polities, with systems of noble lineages sharing territorial power" (Eidem and Laessøe 2001, 25). While called Turukkeans, with an implied ethnic component through

the use of logograms, the letters mentioning the Turukku often describe the specific kingdoms and capital cities. For example, Itabalḫum was the kingdom ruled by Pišenden, with its capital at Kunšum, but other kings and kingdoms interact with each other (Eidem and Laessøe 2001, 26, 134). These kings allied with each other, creating a federation called Turukku.

The political organization of the Turukku is only visible through the letters and inscriptions of external polities but reveals a multi-tiered system of organization. Apart from the main king, multiple officials conducted business and led armies of the Turukku federation, like Pišenden's deputy Talpuš-šarri (Eidem and Laessøe 2001, 130). The language Pišenden used when addressing Talpuš-šarri and other subordinate Turukkean officials was far more respectful than the commanding terms kings like Šamši-Adad use to their underlings (Eidem and Laessøe 2001, 160). The Mesopotamian texts depict the Turukku as a collection of kings, headed by one paramount figure, with each kingdom based in a city in the mountains of Iran. While the Mesopotamian authors present a fully confederated political system, the available texts do not reveal the mechanisms behind the initial formation and extent of royal control. However, the inscriptions on elite Turukkean seals show a system of patrilineal succession, with a chain of at least three kings represented from Pišenden, Turukti, and Uštap-šarri. Whether the Turukkean kings extended their dynastic rule through consensus building or coercive violence awaits further study of Turukku texts or synchronizations of contemporary archaeological material. Intriguingly, the general structure of patrilineal succession over a confederated

group of small Hurrian kingdoms mirrors the proposed formation of the Urartian state centuries later (Burney 2002; Zimansky 1985, 48-50).

Reconstructing the possible locations for Turukku and its constituent minor kingdoms plays a major role in understanding the historical geography of northwest Iraq and northeastern Iran in the Bronze and Iron Ages. As a large portion of the texts concerning Turukku originate at Tell Shemshara, the toponyms location is a crucial piece in the puzzle of Turukku. The Tell Shemshara letters specify Turukku's higher elevation compared to Šušara. Further, accounts concerning travel to Turukku use the Akkadian verb "elûm," which literally means to "go up," but is also used in the context of rising in elevation into the mountains.[5] Travel from Turukku to Tell Shemshara uses the term "warādum," going down (Eidem and Laessøe 2001, 28). The path onto the Iranian plateau from Tell Shemshara passes by Qalat Dizeh, rising into the mountains to Mahabad (Levine 1974, 102). Turukku's near-complete absence from textual archives on the Mesopotamian plain supports a location on the Iranian plateau, some distance from Mesopotamia.

Turukku's specific location on the Iranian plateau requires postulation and contextual clues. Given the federation of settled cities, one expects relatively large valleys and agricultural zones supporting the various constituent kingdoms. Eidem and Laessøe propose the Lake Urmia basin as the core of Turukku, primarily based on its size and population (Eidem and Laessøe 2001, 28–29). The geography of the basin corresponds well with the expected political makeup with Turukku, with many semi-

[5] SH 1: 49, 53, 58, 59, 33, 44, 64

isolated areas of sedentary occupation around one contiguous area. Further, Šušara's subservient relationship with Turukku connects to the translation of Utûm as "gate-keeper," as that site guarded the main passage into the mountains nearby Qalat Dizeh. Pišenden's letter requesting assistance from Elam and Namri against Kakmum also establishes Turukku's location in Iran adjacent to another Trans-Tigridian entity, Kakmum.

Kakmum

Kakmum's appearance in the texts of the Bronze Age, contemporaneously to Turukku, reveals a semi-nomadic group of people located somewhere in the mountainous area north of the Rania Plain. The toponym's possible location around modern Soran helps illustrate the history of Sidekan before the rise of Muṣaṣir. However, locating Kakmum first requires parsing whether the various texts discuss the earlier entity of Kakmium or the Trans-Tigridian Kakmum. Kakmium is first mentioned in texts from Ebla when describing a person named Ennaya from the city of Šubugu in the region of Kakmium (Pettinato 1981, 216). Scholars have different interpretations about the location of this polity. Unsurprisingly, scholars focusing on the Ebla material tend to locate Kakmium in Northern Syria, near Ebla (Archi, Piacentini, and Pomponio 1993, 326; Bonechi 1993, 144–45). Röllig mentioned only the Trans-Tigridian Kakmum, although his article came out a few years before the complete publication of the Ebla archive (1976). Like Röllig, Pettinato locates it on the Tigris, and Diakonoff east of the Tigris, although only Pettinato knew Kakmium from Ebla (Diakonoff 1956; Pettinato 1981, 216). Likewise, Westenholz states, "the earlier Kakmium is perhaps to be located in the

Khabur region or even further to the west," while Kakmum is "the area south of Lake Urmia" (1997, 248–50). Overall, little evidence supports the conflation of Kakmium and Kakmum as one state, despite their nearly identical names.

Eliminating the references to Northern Syria Kakmium yields a limited corpus of texts concerning Kakmum but spanning centuries. The earliest reference comes during a rebellion of a king of Simurrum, Puttimadal, against king Naram-Sin of Akkad, in which an unknown king of Kakmum joins in the uprising (Grayson and Sollberger 1976; Westenholz, Joan Goodnick 1997, 242–45, 248–53). While this text was likely composed later, it demonstrates that Kakmum may have begun as early as the Old Akkadian period. During the Ur III period Kakmum appears in their corpus only once. Despite the wealth of texts from the period, only one record of "two sheep for Dugra, men of Kakmu," mention the polity, and the context provides little assistance in any historical reconstruction (Röllig 1976; Walker 1985, 193). Kakmum's general absence in the Ur III texts may be because of its distance or geographic isolation from the core of that state. Despite the Ur III kings' many campaigns into the mountains of Iran, those treks mainly occurred nearby the Old Khorasan Road, the primary access route across the Zagros Mountains into Iran, beginning near the Sirwan/Diyala River, near the findspot of the Annubanini Stele, far south of Soran (Steinkeller 2007; Alvarez-Mon 2013). The distances and obstacles between southern Mesopotamia and the northern Zagros Mountains may have insulated Kakmum from the Ur III kings' advances. Near the end of the Ur III dynasty, Iddi(n)-Sin's military campaigns began to reach Kakmum's domains. The Simurrumian king's Haladiny and Jerusalem Inscriptions detail conquests against

Kakmum while expanding Simurrum's borders to the north (Shaffer, Wasserman, and Seidl 2003, 1–11; Ahmed 2012, 255). Using the findspots and clues from those texts, Kakmum must be located north, northwest, or northeast of the Rania Plain.

After a small gap in time, Kakmum vigorously reappears in the textual record with a litany of political connections in the Tell Shemshara archive. The archives reference the only named king of Kakmum, Muškawe. The letters record an attack by Muškawe and his men against the city of Kigisbši, carrying away 100 sheep, 10 cows, and an unknown number of men, during the period contemporary to Šamši-Adad's Old Assyrian reign (Eidem and Laessøe 2001, 24). Another letter dealing with the loyalties of Yašub-Addu of Aḫazum, the kingdom downstream of Dokan, demonstrates Kakmum's role in the political system of the time. The letter is from Šamši-Adad to Kuwari of Šusara. In it, he expresses his disappointment and rage towards Yašub-Addu after that leader changed his allegiance from Šimurrum, to the Tirukkeans, to the ruler Ya'ilanum, to Šamši-Adad himself, before finally pledging fealty to the king of Kakmum (Eidem and Laessøe 2001, 23). Aḫazum is generally considered the land between the Rania Plain and Erbil, with its capital of Šikšabbum possibly located at the mound of Satu Qala (Laessøe 1985, 182; Eidem and Laessøe 2001, 22). Shifting alliances and allies are evidenced again in a letter by Pišendēn, a Turukkian king of the kingdom of Itabalḫum. He attempts to persuade the kingdoms of Elam, Namri, and Nikum to join in his struggle, promising "gold and costly things if they will make attacks on the land of Kakmum" (Eidem and Laessøe 2001, 143–44).

A further letter references Kakmum in the context of Šurutḫum, likely located at or near the Dukan Gorge. The letter states, "the face of Kakmu of Šurutḫum has turned to my lord. Rejoice!"(Eidem and Laessøe 2001, 110–11). The identity and location of Šurutḫum elucidate its relationship with Kakmum and that polity's location. In an inscription of the Elamite ruler Šilḫak-Inšušinak, it occurs along with Arrapha, Nuza, Hašimar, and Zaban, all located in the area of the Lower Zab and Diyala Rivers (Astour 1987). More specifically, it occurs alongside the geographical name Šašrum in Ur III documents, indicating a location near the Rania Plain (Walker 1985, 107). A gorge in the text likely refers to the modern Dukan Gorge, bordering the Rania Plain (Astour 1987). The Kakmum in this letter does not refer to the polity, rather a person with an identical name. Šurutḫum thus may not be in the realm of Kakmum itself but may be close to it. Further letters from Tell Shemshara[6] detail preparations for attacking Kakmum (Eidem and Laessøe 2001, 142–43).

Letters and inscriptions from areas distant to Šusara mention Kakmum, painting an image of a powerful and aggressive entity. Kakmum's soldiers demonstrate clear military acumen in a letter reporting two men captured above (*elûm*) Ekallatum and detained in the palace of Kakmum (Frankena 1966, 28–29). The Akkadian word *elûm* contains multiple meanings, often translated as "above," but carries the general impression of higher. It may likely refer to upstream or into the mountains from Ekallatum. Another instance, from soon after Šamši-Adad's death, shows a contingent of Kakmi troops infiltrating what is commonly considered part of the Assyrian heartland.

[6] SH 1: 802, 808, 815

That letter describes a raiding force of 500 men from Kakmum, led by a ruler named Gurgurrum, defeating a force of 2000 men near Qabra (Lackenbacher 1988; Eidem and Laessøe 2001). Qabra's exact location remains unknown, but it likely lies somewhere in the Assyrian heartland, not far from Ekallatum itself (Charpin 2004; MacGinnis 2013). Recent excavations at Kurd Qaburstan, west of Erbil, suggest identifying that site as Qabra (Schwartz et al. 2017). Kakmi troops again demonstrate excellence in battle by their role as mercenaries for the kings of Kurda and Karana in an invasion of Šubat-Enlil (Vincente 1992). Defeating these people in their mountain stronghold was a great accomplishment, which Hammurabi boasted about in the title of his 37th year, describing his victory over the Gutians, Turukku, Subartu, and Kakmum (Charpin 2004).

A handful of other texts reference Kakmum, revealing details about the nature of the people and the kingdom's relationships. A text from Tell Rimah records a delivery of wine by people from Kakmum (Dalley 1976). From Mari, a letter mentions a messenger originating from Kakmum (Kupper 1954). From the waning days of the Old Babylonian dynasty, under Samsu-Iluna, a text describes the deportation of people from Arrapha and Kakmum to Babylonia (Ungnad 1920, 134). After the deportations recorded during Samsu-Iluna's reign, references to Kakmum disappear in the historical record.

With this corpus of texts concerning Kakmum, the most likely location for this polity is in the northwestern Zagros, specifically in the modern Soran district. Previous scholarship disagreed on Kakmum's location, but the entity was not the primary focus of the relevant studies. Astour proposed a location "between Ekallatum and Erbil," possibly biased by the references to Kakmium in the Khabur (Astour 1987). The fact that

Kakmum remained an enemy of Šamši-Adad after his capture of Erbil eliminates this location, as it would necessitate the improbable situation that Kakmum somehow remained independent and hostile while wholly surrounded by Šamši-Adad's growing nascent empire (Eidem and Laessøe 2001, 23). Frayne placed Kakmum at Koy Sanjaq using the names' morphological similarities, though this spot makes little sense given its proximity to Erbil, Ekallatum, and lack of isolation (Frayne 1999, 171). In the publication of the Tell Shemshara letters, Eidem and Laessøe (2001, 24) suggest a position between Sulaimaniya and Chemchamal, to the south of Tell Shemshara. However, Eidem previously envisioned Kakmum north of the Rania Plain and subsequently ruled out its location in the Pishdar Plain (Eidem 1985; Ahmed 2012). The lack of references to Kakmum in the Ur III campaigns and Iddi(n)-Sîn's campaigns to the north seemingly rule out the placement between Sulaimaniya and Chemchamal. Westenholz believes Kakmum should be in "the area south of Lake Urmia or the northwest Zagros mountains," agreeing with Röllig's assessment (Röllig 1976, 19; 1997, 186). Shaffer and Wasserman read Kakmum as "Nimum," in the Jerusalem Inscription, but they locate that toponym in "the area of present-day Ruwanduz [Rowanduz]" (2003, 28). Most recently, Ahmed (2012, 270–71) agreed with Shaffer and Wasserman's location around Rowanduz. His only hesitation was the "lack of a plain territory suitable for abundant agricultural production, which was the basic economic activity together with animal husbandry of these old kingdoms" (Ahmed 2012, 271).

Two possible locations of Kakmum have sufficient evidence: north of the Rania Plain and the northwestern Zagros Mountains adjacent to Lake Urmia. Ahmed's

objection to Rowanduz is quickly rebutted by the large Diana Plain directly abutting Rowanduz and included in its logical political catchment. Documented routes predating the modern road construction reinforce the connection between Rowanduz and the Rania Plain to the south, providing additional evidence. Following the Handbook of Mesopotamia, a British colonial manuscript that records the various routes around Iraq, a popular travel itinerary left Rania, passed Betwate village (a possible location of Kulun(n)um), headed north, crossed the Korek Dagh, and descended to Rowanduz (Division 1917, 269–72). An alternate route passed Gulan village, followed another of the parallel north-south valleys to the Handrin valley, directly next to Rowanduz (Division 1917, 273–78). Further, two more passes onto the Urmia basin, the Gawra Schinke and Kelishin Passes, are located in this area, explaining the conflict between Turukku and Kakmum (Kenneth 1919).

There is little direct archaeological evidence for Kakmum in the Soran district because of limited knowledge regarding the kingdom and nascent excavations of Early Bronze Age material. However, a few sherds of Khabur Ware pottery at Gird-i Dasht, a large mound on the plain in Soran excavated by RAP (Chapter 1), indicate a connection between Mesopotamia and the plain during the Bronze Age. While Gird-i Dasht is one of the only possible candidates for a large Bronze Age city on the Diana Plain, the written description of Kakmum does not present a dense urban environment. Much like the Turukku are often written as a single ethnic entity despite clearly containing many constituent kingdoms and cities, Kakmum may refer to a quasi-ethnic group of confederated groups rather than a single point on a map. Kakmum was likely located

between Utum to the south, Turukku to the east and Mesopotamian city-states to the west. The extent of Kakmum's influence may have spanned from Spilik Pass in the west, to Sidekan and Kelishin Pass in the east, divided from the Turukku by the peaks of the Zagros Mountain;'s *chaine magistrale.* The absence of large Bronze Age sites or tells in the Soran district does not refute Kakmum's location but corresponds well to the textual depiction of the kingdom's few references to cities, spread out in small settlements around the area.

The question of Kakmum's location is not purely an exercise in Bronze Age historical geography but may provide information about the founding of Urartu. After the use of the toponym ends in the Middle Bronze Age, it appears once again during the reign of Sargon II in the context of campaigns to the Iranian plateau. In Sargon II's Letter to Aššur, one reference describes Urartu as the land Kakmê.[7] The Assyrian king's scribes used their Mannean allies' name for the polity, as the only other descriptions of Urartu as Kakmê occur in the context of Mannea (Fuchs 1994, 440-41). However, this name for Urartu appears only during Sargon II's reign. The Mannean terminology may reflect the ancestral roots of Urartu to the kingdom of Kakmum, an archaic term for the rulers of the Iron Age empire. However, use of this name occurs only under Sargon II and not in any of the recorded Mannean texts, casting doubt on this connection. The possible continuity of the name Kakmum through the centuries and the parallel political structure of the Turukku are data points in the understanding of Urartu and Muṣaṣir's origins, discussed further in Chapter 7.

[7] RINAP 2 65: 56

Late Bronze Age & Early Iron Age

Following Hammurabi's reign, references to the area of Soran and Sidekan disappear from the historical record until Assyrian kings campaigned into this area, which they call Muṣaṣir. While the northern Zagros does not appear in available textual records, the region's history did not cease. To the south, on the plains of Mesopotamia, Babylon was ruled by the Kassite dynasty. Although the exact origins of the Kassite ruling elite are unknown, multiple scholars postulate that the rulers originated from the other side of the Zagros Mountains and, after a gradual migration, subsequently conquered Babylon and its people (Zadok 2013, 2–3; Liverani 2014, 364). The Kassite kings ruled over southern Mesopotamia for a notably long period, from sometime in the early 14th century BCE to about 1150 BCE (Clayden 1989, 47–52). Unlike the previous kings of Ur III and Old Babylonia, the ruling Kassites largely avoided distant expansionary campaigns. They primarily controlled central Mesopotamia, from the Middle Euphrates to the far south, the so-called Sealand (Liverani 2014, 364). The absence of long-distance campaigns, in large part, accounts for the lack of written records detailing actions in the northern Zagros. While Kassite dominion may have extended further from the Mesopotamian plains, up into sections of the central Zagros Mountains, there is no evidence of influence at Sar-i Pol Zohab, located near the Great Khorasan Road (Brinkman 1972, 277; Reade 1978). Reaching this area was possible as it avoided the core of the Assyrian state to the north. In the latter half of the Kassite period, the kings fought against and conducted treaties with a newly resurgent Assyrian state growing from its religious center at Aššur (Liverani 2014, 366). Around 1230 BCE, the

Assyrian king Tukulti-Ninurta I soundly defeated the Kassites, sacking Babylon, taking king Kashtiliashu IV hostage, and conquering the southern state (Brinkman 1972, 276–77). Assyrian hegemony over Babylon lasted for seven years through a proxy king before a revolt in Assyria provided the weakness required for the Kassite king Adad-shum-usur to regain the throne (Liverani 2014, 366). In the mid-12th century, invading Elamite armies from southern Iran ended Kassite rule over Babylonia by sacking the capital (Brinkman 1972, 277). In the succeeding power vacuum, the kings of Assyria grew their state's power into the Neo-Assyrian Empire. Unlike the Kassites, the Neo-Assyrian kings were quick to conduct campaigns outside of their core and had a particular affinity for operations in the Zagros Mountains. The Sidekan area would eventually be bounded on both sides by the powerful Neo-Assyrian and Urartian empires.

Assyria

The growth of the Neo-Assyrian state, from its founding days as the Middle Assyrian kingdom in the second millennium to its maximum extent ruling an empire from Egypt to Persia, is a near millennia-long tale of the emergence of the state, its contraction, and eventual rise to be the most powerful empire in the Near East. Postgate divides Assyrian territorial history into four phases: 1, creation and expansion (1400-1200 BCE); 2, recession, often referred to as a 'dark age' (1200-900 BCE); 3, re-establishment of borders (900-745 BCE); 4, final expansion deep into Egypt and Iran, often associated with the 'Sargonic Kings' (745-605) (Postgate 1992, 247–51). During the periods of expansion and foreign military campaigns, the accounts of the Neo-Assyrian rulers' wars and battles against enemies help reconstruct the historical

geography of the northern Zagros and the area's relationship with the surrounding powers. Specifically, the Assyrian texts provide the most substantial historical documentation of Muṣaṣir. Throughout all phases, the Assyrian kings spent considerable blood and treasure to subdue the people in the mountains, including their northern neighbors, Urartu. The history of the Assyrians, as the consistent power to Sidekan's west for centuries, provides insights into the interactions and identity of this intermontane region.

Assyria emerged early in the second millennium as the Old Assyrian kingdom under Šamši-Adad I, mentioned in the various battles of the Bronze Age. While the Old Assyrian kingdom's power was short-lived, falling under the control of the Old Babylonian state not long after Šamši-Adad's death, it would eventually form into the most powerful empire in the region. Centuries later, during Kassite rule in southern Mesopotamia, the Assyrian state began to form. From the 17th-14th centuries, the core Assyrian territory around Aššur and Nineveh fell under the direct and indirect control of the Mitanni state. Following the rule of Ishme-Dagan (1781-1741), the most notable documentation of the Assyrian rulers is the later "Assyrian King List," until the steady rise of texts in the thirteenth century (Larsen 1976, 27–47; Kuhrt 1994, 348–49; Reade 2011, 1–8). Ruled by Indo-European kings out of a stronghold in the Khabur Triangle in modern Syria,[8] the Mitanni state exerted considerable pressure and control on its neighbor (Liverani 2014, 290–93; 347–48). Under the reign of Aššur-uballit I (1365-1330), Assyria gained independence from their Mitanni overlords. Conflict between the

[8] Geographical locations follow *The Helsinki Atlas of the Near East in the Neo-Assyrian Period* (Parpola and Porter 2001), unless otherwise noted.

Anatolian Hittite Empire and Mitanni during Aššur-uballit I's reign, including the Hittite capture of much of the western Mitanni holdings, led to the murder of the Mitannian king Tushratta and a subsequent proxy battle over Mitanni royal succession (Wilhelm 1995, 1251–52). Aššur-uballit I, now a king on equal standing with Hatti, Kassite, and Babylonia, conquered areas of northern Mesopotamia around Nineveh and Erbil, while Tushratta's son Shattiwza ruled a weakened state under the implicit authority of Hatti (Szuchman 2007, 4).

Fifty years later, Adad-nirari I (1307-1275) placed Shattiwaza's son, Šattuara, on the Mitanni throne as a vassal. After a revolt by the Mitanni puppet, Adad-nirari I led a campaign against Mitanni, capturing multiple cities in the Khabur Triangle, like Taidu and Waššukani, and reducing the Mitanni kingdom to a regional power in the Upper Euphrates (Wilhelm 1995, 1253–54; Liverani 2014, 349–51). Upon his conquest, Adad-nirari created a new Assyrian provincial capital at Taidu, indicating complete annexation and solidifying control over the land (Harrak 1987). Adad-nirari I's annexation of the Mitanni lands in the Khabur Triangle integrated this productive agricultural base into Assyria, permanently extending the core of Assyrian power. The original Assyrian territories in the Upper Tigris plus the addition of the Khabur Triangle created the core "Land of Aššur" (*māt Aššur),* or the "Yoke of Aššur" that would form the political and economic core of Assyria (Postgate 1992, 249).

At Middle-Assyria's greatest extent, in the early 13th century, the powerful kings Shalmaneser I and Tukulti-Ninurta I conducted campaigns in neighboring lands and, in the case of Tukulti-Ninurta I, directly intervened in the politics of the neighboring powers

by sacking Babylon (Yamada 2003). Although direct Assyrian control over Babylonia lasted for only a few years, the act of intervention in their southern neighbors was a sign of Assyria's rise on the world stage. Assyria, during this time, stretched from the Zagros foothills to the upper Euphrates and the southern Taurus Mountains in Anatolia. Tiglath-pileser I marched across the Euphrates, extracting tribute, and reached the cosmologically esteemed Mediterranean Sea, an overt display of great power (Liverani 2014, 465). Another of his campaign texts describes a campaign against Muṣri, believed to be the forebearer of the Iron Age kingdom of Muṣaṣir.[9] This text and previous references to the kingdom by 14th-century Assyrian kings denote the earliest record of interactions between Mesopotamian populations and Muṣaṣir. During this brief epoch of increased power, the Assyrian kings continuously attacked the people in the Zagros Mountains to the east, establishing a precedent for succeeding kings (Kuhrt 1994, 355–58).

Through the 12th century, Assyria maintained its premier status in the Near East. After the reign of Tiglath-pileser I, at the end of the 12th century, the Assyrian state would enter a period of contraction lasting for about three hundred years as it weathered the assaults from migrating ethnic groups in the surrounding regions. The state withdrew to its core of the "Land of Aššur." Like the previous "dark age" between Old and Middle Assyria, the continuation of kings is known through the "Assyrian King List," although surviving textual accounts provide a little documentation about the actions of individual kings. None of the neighboring powers, the southern Babylonians or the northern Hittites, maintained their strength during this time, as climatic change and vast numbers of

[9] RIMA 2 A.0.87.1: 82-95

migrating Arameans destabilized the whole region (Russell 1985, 58; Liverani 2014, 467). Advancing Arameans reached Nineveh and forced the Middle Assyrian kings to take refuge in the mountains of Kirruri, northeast of Assyria's core (Tadmor 1958, 133–34). Analysis of the climate during this time indicates that periods of drought and climatic change precipitated this massive disruption in the political landscape of the region (Neumann and Parpola 1987). Despite the apparent mass migration of Arameans, archaeological evidence suggests a slower, long-term change, with conflict arising concurrently with changes in the climate (Szuchman 2007, 111–18; 53–160). Although the extent of Aramean migration in the Zagros Mountains is unknown, it provides a context to understand archaeological finds in the area dating to this period of Assyrian contraction in the west. Despite the small and weakened state, the Assyrian kings of this period did not cease their military operations. Kings like Aššur-bel-kala (1074-1057), ruling from the greatly weakened state centered around Aššur, maintained the strength to campaign in the mountains to the north, though focusing their efforts on holding back Aramean advances (Kuhrt 1994, 361–62).

Following the centuries of a small and weakened Assyria state, the kings Aššur-dan II and Adad-nirari II (934-912 and 911-891) began strengthening and reconstituting Assyria, marking the beginning of the Neo-Assyrian Empire. Campaigns during their reigns occurred within the traditional boundaries of Assyrian control and focused on bringing the new, small Arameans cities and kingdoms under the direct control of the Assyria crown (Russell 1985; Liverani 2014, 475). Repeated campaigns, first by Aššur-dan II and his son Adad-nirari II, in areas held by their forebearers, solidified their

holdings. Assyrian kings recast the conquered kings of vanquished territories previously under Middle Assyrian control as governors of this growing kingdom (Kuhrt 1994, 479). Under these kings and the following ruler, Tukulti-Ninurta II, Assyria expanded to reach its maximum size under the Middle Assyrian king Tukulti-Ninurta I. Tukulti-Ninurta II embarked on two marches, one to the south and one to the east, defining the limits of Neo-Assyrian influence at the time. To the west, he reached Muški, a kingdom that replaced Hatti's core, and to the south, he marched along the Euphrates to Sippar, in the north of Babylonia (Liverani 2014, 476).

When the following king, Aššurnasirpal II (883-859), took the throne, Assyria began a period of mass expansion and campaigning around the Near East. Over fourteen campaigns, he expanded the state to include all areas lost over past generations and new territories to the north and southeast. Aggression by kingdoms in the northern Taurus Mountains, Nairi and Habhu, forced Aššurnasirpal II and his armies to conduct frequent campaigns and skirmishes. In the Upper Tigris, Assyria's growing power and consolidation led to the pacification of the kingdom of Bit Zamani, near modern Diyarbakir, and the creation of a permanent Assyrian outpost, Tušan (Kuhrt 1994, 483). Despite the outpost, Nairi and Habhu maintained independence in the nearby mountains. Aššurnasirpal II also became the first king since Tukulti-Ninurta I, almost four centuries earlier, to march to the Mediterranean Sea, defeating the small kingdom of Bit Adini on his partly ceremonial journey (Liverani 2014, 479). To the southeast, he began expanding Assyria's borders into the mountains, leading a series of campaigns against the kingdom of Zamua in the Shahrizor Plain and conquering the area (Levine 1973, 16–22). By

establishing two colonies in the kingdom after this conquest, Aššurnasirpal II established a foothold in the Zagros Mountains that later kings would use as a base to launch mountain campaigns (Postgate 2000). Notably, in Aššurnasirpal II's many campaigns, his forces never crossed further than the "first row" of hills surrounding Assyria (i.e., the first mountain range in the series of roughly parallel ranges extending into the higher mountains) (Liverani 2004, 217).

In addition to demonstrating the military power of Assyria and expanding the nascent empire's borders, Aššurnasirpal II founded a new city, and with it created a new imperial ideology and style. In 879 BCE, Aššurnasirpal II began his reign ruling from Aššur, before moving the capital to Kalhu, the modern site of Nimrud (Radner 2015, 27). The city's construction was resource-intensive and set up in a planned manner, not unlike the later Roman cities that signified that empire's imperial control (Mallowan 1966; Oates and Oates 2001). The city's many inhabitants served to not only support the imperial war effort but produce a distinctly Neo-Assyrian style of art and architecture. Hundreds of stone reliefs detailing the king's accomplishments and military victories, created in a style similar to the victory stelae of the Bronze Age, covered the walls of his newly constructed palace. Extensive texts providing itineraries of the campaigns were often included on the reliefs, creating in-depth reconstructions of the travel and battles (Oates 1963, 4). One of the most notable of Aššurnasirpal II's, the Banquet Stele, describes his accomplishments through texts and imagery (Mallowan 1966, 57–73; Oates and Oates 2001). Excavations by Layard in the 19th century recovered many of the wall reliefs, providing a tremendous bounty of knowledge about not only Aššurnasirpal II's

campaigns but also how the Assyrians viewed their surrounding neighbors (Layard 1849). This style of documenting military victories, popularized at Nimrud, continued throughout the Neo-Assyrian kings' campaigns. This and other Neo-Assyrian reliefs provide an invaluable dataset to reconstruct the historical geography of the surrounding regions.

Aššurnasirpal II's successor, Shalmaneser III (858-824), continued his father's policy of aggressive expansion, renewed with new zeal to bring new regions under Assyrian hegemony (Liverani 2014, 481). Shalmaneser III's reign oversaw a reorganization of the Neo-Assyrian territories to maintain stability and better control. For the first time, the Assyrian armies fought far from the Assyrian homeland and conquered arduous territory. Specifically, using Liverani's representation of the hills and mountains of the Zagros piedmont as "rows," Shalmaneser III and his generals reached lands past the first row, including to the east of the *chaine magistrale* (Liverani 2004, 217). From the strongholds on the Upper Tigris that Aššurnasirpal II strengthened, Shalmaneser III's armies campaigned into the northern mountains and brought the kingdoms of Gilzanu, Hubuškia, Melid, Alzi, and Dayaeni directly into the Assyrian sphere as vassals (Liverani 2014, 481). In the west, Shalmaneser III fought against an alliance of city-states in Syria at Qarqar, and in the east, his armies used Zamua to launch campaigns into the highlands of Iran (Russell 1984; Roaf 1990; Postgate 2000; Liverani 2004, 215; 2014, 482). To the south, the king of Babylon, Marduk-zakir-šumi, called upon the Assyrian king, justifying an earlier treaty, to help remove his brother, a usurper, from the throne of Babylon (Kuhrt

1994, 488–89). Despite the invitation to enter Babylon, the military act demonstrated a degree of power, signifying the king's status in the Near East.

While Shalmaneser III and the Neo-Assyrian Empire reached new heights of power, in their north, a powerful new empire arose from the previously confederated states of Nairi: Urartu. Up to this time, Nairi appeared mainly as a geographic designation, but during Shalmaneser III's reign the entity began to be referenced as a political organization (Luckenbill 1989, 232). Created out of the original lands of Nairi that threatened previous Assyrian kings, this state provided Shalmaneser III an additional adversary. Against this new power, directly adjacent to the Assyrian heartland, the Neo-Assyrian king conducted three campaigns; they penetrated into the heart of Urartu, around its heartland of modern Lake Van (Russell 1984, 171; Kroll et al. 2012, 10). These campaigns provide the first references to Urartu and are instrumental in understanding the origins of that kingdom (Chapter 7).

In addition, Shalmaneser III also embarked on campaigns into northwestern Iran, to the south of Lake Urmia, in the Mannean lands, departing from Zamua or nearby (Postgate 2000; Kroll 2012b). This region in the Iranian highlands would become part of an expansive Urartian empire under later kings. These two empires, Assyria and Urartu, quarreled as fierce adversaries, spending the next two centuries fighting nearly constantly, with Urartu successfully resisting full Assyrian domination.

At the end of Shalmaneser III's long reign, a succession crisis overtook Assyria. Over four years Shalamenser III's son, Shamshi-Adad V (823-811) fought against internal threats and usurpers, creating instability in Assyria (Kuhrt 1994, 490). After a

short reign, his son, Adad-nirari III (810-783), ascended to the throne but left little of note in either textual records or expansionary actions (Liverani 2014, 482). Although both kings continued active campaigns during their reigns, the rapid expansion of the Neo-Assyrian state paused during these decades. From the death of Shalmaneser III to the rise of Tiglath-pileser III in 744, the empire existed in a period of relative stasis. However, one of these kings, Shalmaneser IV, mentions Urartu in five of his yearly reports in the Eponym Chronicles (Astour 1979, 4).

Upon Tiglath-pileser III's accession to the throne (744-727), the Neo-Assyrian empire entered a period of expansion, subduing areas beyond its previous control. During the preceding decades of weak Assyrian rule, external factors created pressure on all flanks of the empire and led to Tiglath-pileser III's many military campaigns (Kuhrt 1994, 498). Although he campaigned across the Near East, the record of his expedition north to Urartu serves as a vital document in the reconstruction and identification of polities in the mountains. During the power void in Assyria during the first half of the 8th century, Urartu utilized the relative peace to dramatically expand its borders (Liverani 2014, 487). In year two of Tiglath-pileser III's reign, he and his army set out for Anatolia to capture areas under Urartian hegemony. Specifically, at the town of Arpad, in northern Syria, the Assyrian armies ambushed and forced the retreat of Urartian forces across the Euphrates River (Astour 1979; Tadmor, Yamada, and Novotny 2011, 13). In year ten, Tiglath-pileser III's armies attacked Urartu, this time penetrating to the state's capital of Turušpsa at Lake Van (Tadmor, Yamada, and Novotny 2011, 53–55). While the Assyrian

king recorded this as a victory, he did not successfully capture territory or meaningfully slow the growth of the Urartian state.

After a short, four-year reign by Tiglath-pileser III's son, Shalmaneser V (726-722), the usurper Sargon II seized the throne (Kuhrt 1994, 497). While Sargon II may have been a brother of Shalmaneser V, the evidence is uncertain. After putting down rebellions that took advantage of the apparent weakness of the kingdom, he embarked on many expansionary campaigns, significantly increasing the size of the empire. For the first time, Assyria's influence reached the Mediterranean island of Cyprus, the king set up a new province of Tabal in Central Anatolia, and Sargon II not only assumed kingship over Babylonia but took up residence there (Liverani 2014, 490). Sargon II's eighth campaign against Urartu is well documented and provides the most detailed account of Muṣaṣir. The campaign's details are inscribed on a clay tablet, often described as Sargon's "Letter to Aššur," which provides extensive details over its 430 lines (Muscarella 2006). Sargon II's scribes also detailed the campaign in his annals which describe the full achievements of each year of his reign (Fuchs 1994). Sargon II and his armies defeated the Urartian forces south of Lake Urmia and ravaged the landscape before sacking Muṣaṣir and bringing it under Assyrian control. While this campaign wreaked considerable destruction upon Urartu and Sargon II's depiction of the campaign implies the utter defeat of the kingdom, the Urartian kings continued ruling at least a century more. Sargon II's military sucessses ended with his death on the battlefield in Anatolia while fighting in the province of Tabal (Tadmor 1958).

The conflicts between Urartu and Assyria provide ample documentation of the actions of individual kings and rulers and the many small cities and kingdoms between the major powers. One of these entities was Muṣaṣir, a small kingdom containing strategic and spiritual importance for the kings of Urartu and Assyria and the primary focus of this dissertation. This kingdom's location was almost certainly in the upper reaches of the Upper Zab, in the Sidekan region. An overview of Urartian history and geography provides a foundation for understanding the location and characteristics of Muṣaṣir. Identifying the exact location requires understanding Urartian history, geography, and political organization.

Urartu

The spread of Urartu and the history of its ruling elite is documented by texts from the Urartians and accounts from their militaristic neighbors, the Assyrians. Most Urartian texts are stone inscriptions engraved on the foundation blocks of new buildings, stand-alone stone inscriptions, or rock reliefs (Kroll et al. 2012, 7). In the Corpus die testi Urarte (CTU), the definitive collection of Urartian texts, Salvini divides the texts into five categories: rock and stone inscriptions, inscriptions on bronze objects, inscriptions on clay, other materials, and seal inscriptions (Salvini 2012, 111). Despite these many categories, the inscriptions on stone are, as a whole, the only type that provide details concerning historical events (Salvini 2012, 115). Movable objects, like clay tablets and bronze objects, serve as indications of a ruler's preference over a particular site or the development of Urartian art, although their mobility can obscure the exact origin of the text. However, the far larger corpus of stone inscriptions provide details about military

accomplishments and building activities of monarchs (Kroll et al. 2012, 7–8). In contrast to the vast archives of tablets in neighboring Mesopotamia, the corpus of Urartian tablets numbers only about two dozen tablets. While these tablets occasionally contain interesting information about the history of Urartu, their use for an extensive analysis of the empire is limited. These texts primarily provide information on the spread of Urartian hegemony across the mountains of the Near East and the order of dynastic rule.

Table 1: Urartian King Chronology. Estimated dates from known synchronisms.

King	**Dates**
Arame	859 - 844
Sarduri (L)	830
Išpuini (S)	820 - 782
Minua (I)	782 - 774
Argišti (M)	774 - 781
Sarduri (A)	755 - 735
Rusa (E)	724 - 714
Rusa (S)	713 - 710
Argišti (R)	709 - ?
Rusa (A)	673 - 652
Sarduri (R)	646 - ?

Urartian royal inscriptions, combined with Assyrian synchronisms, aid in reconstructing the order and the length of Urartian kings' reigns. Many royal stone-cut inscriptions are bilingual, written in Urartian and Assyrian, or exclusively in the Urartian language. As Assyrian and Urartian are distinct languages with different linguistic foundations, Semitic and Hurrian, each language uses different words for proper nouns. The most notable example is the name of the state itself. The Assyrians called this entity Urartu, while in the native language of the Urartians, the kingdom was named Biainili

(Kroll et al. 2012, 8). Following convention, the Urartians and their geographic entities are referred to here using the Assyrian terms, when available. Some exceptions are Urartian spellings of geographic names with no known Assyrian parallel and Urartian kings' names.

When referring to the monarch, the Urartian inscriptions only give the ruler's name with a single patrionymic, referencing the king's father but no other relatives (Fuchs 2012, 159; Kroll et al. 2012, 8; Zimansky 2012b, 101). Traditionally, similarly named rulers are traditionally assigned sequential numbers based on these familial connections, such as Sarduri I and Sarduri II. As the Urartians lacked a king list, like those in Mesopotamia, these succeeding digits in the names are modern conventions reflecting the commonly understood order of dynastic succession (Zimansky 2012b, 101). In addition, the primary source of synchronisms, the Assyrian texts, do not refer to the Urartian kings with patronymics, complicating the reconstruction of the order. While most of the Urartian kings' positions in the chronology are secure, uncertainty over a few monarchs necessitates a different way to differentiate rulers of the same name. Given the existence of a patronym for all but the first king of Urartu, Roaf (2007, 187) uses a convention of indicating the specific royal name by a single letter representing the father. For example, Sarduri L and Sarduri A rather than Sarduri I and Sarduri II.

The earliest known mention of Urartu comes from the reign of Shalmaneser I in the 13th century, who records conquering the land of "Uruátri."[10] At this time, the Assyrians used Uruatri as a geographic designation, not as the name of a unified polity.

[10] RIMA 1 A.0.77.1: 27

Contained in Uruatri were eight discrete states, suggesting the federated nature of the area (Grayson 1987, A.0.77.1: 32-36). Though not confirmed, the linkage between this name and the later Urartu is highly likely. A connection between Nairi and Urartu provides substantial evidence to equate the two terms (Salvini 1967). Second-millennium accounts of campaigns against Uruatri and Nairi describe the area as a collection of cities and states, analogous to a confederation rather than a single entity. Shalmaneser I's son, Tukulti-Ninurta I, campaigned north, defeating forty kings of Nairi and reaching the "Upper Sea of Nairi," believed to reference Lake Van[11] (Barnett 1982, 320). Nairi is referenced a century later by the Assyrian king Tiglath-pileser I, who boasts of his successful battle against twenty-three kings of Nairi[12] (Grayson 1972, 12–13). More than a boast, the Yoncali Inscription in the northeast of Lake Van, erected by Tiglath-pileser, confirms the Assyrian invaders entered into the heart of Nairi and is the most persuasive evidence for identifying that lake as the "Upper Sea of Nairi"[13] (Grayson 1972, 38).

After the period of relative decline in Assyria, the Neo-Assyrian king Shalmaneser III records the first conflict against a seemingly unified kingdom of Urartu. Shalmaneser III launched three campaigns against Urartu, in his accession year,[14] 3rd year,[15] and 15th year[16] (859, 856, and 844 BCE), specifically against a man named "Ar(am)amu/e," a.k.a. Arame, described as the king of Urartu, and in the process, destroys the royal capital of Arzaškun (Fuchs 2012, 135–38). The location of this city is

[11] RIMA 1 A.0.78.4: '5
[12] RIMA 2 A.0.87.1: iv 83
[13] RIMA 2 A.0.87.16
[14] RIMA 3 A.0.102.2: i 14-25
[15] RIMA 3 A.0.102.2: ii 30-56
[16] RIMA 3 A.0.102.6: iii 31-41

unknown, and later references to Urartu omit any mention of this toponym (Burney 1957, 39). Salvini (1995) suggests a location in the south of Lake Urmia, while Kroll (2012b), Schachner (2007), and Burney (2002) believe the city was near the eventual Urartian core of Lake Van (discussed further in Chapter 7). The name Arame only appears in the Assyrian texts which, combined with the connections to the Assyrian designation for Aramean, led Salvini to argue that this name referred to an unnamed Aramaic ruler of Urartu (Salvini 1995, 26–27). In Salvini's interpretation of Aramu as Aramean, a ruling class of Urartians, literate in a linguistically Hurrian Urartian dialect, overthrew Arameans rulers, of which Aramu was one. Fuchs, however, refutes this interpretation and believes the name refers to a specific ruler, possibly the Urartian ruler Erimena (Fuchs 2012, 159). While the connection of Arame and Erimenea is unlikely, discussed below, there is no reason to suspect Arame was Aramean, apart from linguistic similarities.

At the end of Shalmaneser III's long reign, in 830 BCE, he fought a new ruler of Urartu, named "Serduri[17] (Fuchs 2012, 135). This king is undoubtedly the same ruler that Urartian inscriptions named Sarduri (I), son of Lutipri, whose name adorned a series of six inscriptions around Lake Van.[18] Notably, Sarduri's inscriptions are the first at the fortress of Tušpa, the new capital of Urartu. The connection between Sarduri L and Arame, specifically the lack of stated familial connections in the Assyrian texts, is a crucial point of debate concerning the nature of the origins of the Urartian elites and the

[17] RIMA 3 A.0.102.14: 141-145
[18] CTU A 1-1

royal dynasty. With Sarduri L, an unbroken chain of Urartian kings begins, corroborating Assyria details.

In 820 BCE, the Assyrian king Šamši-Adad V attacked an Urartian named "Ushpina,"[19] surely an Assyrian version of the name of the Urartian king Išpuini (Fuchs 2012, 139; Kroll et al. 2012, 10). Following this campaign, the two empires entered a period of relative peace and coexistence until 781 BCE (Fuchs 2012, 140). During this period, Išpuini and his son Minua reigned over Urartu (Grekyan 2006). The two Urartian rulers displayed a unique practice of inscriptions with both Išpuini and his son's names. In the early years of Išpuini's rule, the inscriptions bear only his name, while inscriptions in later years invoke him and his son. Minua's name in inscriptions leads some to believe that Minua ruled as a crown prince in the later days of Išpuini's reign (Çifçi 2017). Minua's inclusion on the Kelishin Stele could commemorate a pilgrimage to Muṣaṣir to crown Minua as crown prince, although that interpretation is open to considerable debate (Chapter 7). Apart from the coexistence of royal names, the only other evidence of an Urartian crown comes a half-century later, in the account of Sargon II's sack of the Ḫaldi temple where he states that the Urartian king. The evidence that Minua served as the crown prince is refuted in part by the absence of special titles for Minua in the inscriptions of his father (Kroll et al. 2012, n. 23).

After a decades-long period of relative coexistence between Assyria and Urartu, the Neo-Assyrian king Shalmaneser IV conducted campaigns against Urartu every year between 781 – 778 BCE (Millard 1994, 58). The Assyrians launched another campaign in

[19] RIMA 3 A.0.103.1: ii 16-30

776 BCE, followed by an Assyrian field marshal's victory over Urartian king Argišti in Western Iran (Fuchs 2012, 140). Argišti's patronymic describes him as the son of Minua. Given that the last synchronism between Assyria and Urartu was Ushpina in 820 BCE, followed by Argišti in 776 BCE, Minua's entire reign existed in those 44 years. In a sign of the imperfect nature of campaigns as historical records, Argišti's annals describe a victory over the Assyrians, a campaign the Assyrians record as a triumph by their forces (Fuchs 2012, 150).

Argišti's son, Sarduri A (II), provides one of the most detailed accounts of an Urartian king's various military and construction activities in his Sarduri Annals, inscribed near the Urartian capital at Lake Van (Fuchs 2012, 150). This text and corresponding military campaign inscriptions around the region describe Sarduri A's conflicts with Assyria, Melitea (the same entity as Hati/Ḫatti), Mannea, and Qumaha in the upper headwaters of the Euphrates (Fuchs 2012, 153–55). The annals boast of a victory against the Neo-Assyrian king "Aššurnirarini Adadinirariehi,"[20] an Urartian rendering of the Assyrian ruler Aššur-nerari V, son of Adad-nerari III, in Sarduri's 2nd year. Utilizing Assyrian sources and their royal chronology dates this event sometime between 755 and 753 BCE, given the reports of Urartian campaigns by the Assyrian kings (Fuchs 2012, 153–54). Aššur-nerari V's successor, Tiglath-pileser III, records a victory over Ištar-duri/Sarduri in 743 BCE, indicating at least another decade of the Urartian king's rule. Eight years later, in 735 BCE, Tiglath-pileser III again attacks

[20] CTU A 9-1: r 8-9

Sarduri, besieging the Urartian king inside his capital of Tušpa at Lake Van (Fuchs 2012, 136).

After the reign of Sarduri A, the next Urartian king mentioned in an Assyrian text is Ursa/Rusa, an opponent of Sargon II in his eighth campaign (714 BCE). Unfortunately, given the lack of patronymics in the Assyrian text and the existence of multiple kings named Rusa in Urartu, the identity of this king is under debate. Chronologies from the last century of scholarship assumed that Rusa, son of Sarduri, refers to the king immediately following Sarduri II, the grandson of Argišti, and the Ursa mentioned in Sargon II's campaign (Zimansky 1990; Salvini 2008, 23; Kroll et al. 2012). Lehman-Haupt proposed in 1921 that Rusa S was the enemy of Sargon II, contrasting Thureau-Dangin's earlier proposal (Lehmann-Haupt 1921). Thureau-Dangin placed king Rusa, son of Erimena, as the adversary of Sargon II in the text (Thureau-Dangin 1912, xix n.3). Following Lehman-Haupt's chronology, most publications maintained the successive order of Urartian kings with Rusa E in the waning days of the kingdom (Roaf 2007; Salvini 2008). Recently, Roaf, Seidel, and Kroll argued for Rusa E's rule before that of Argishti, son of Rusa (Seidl 2004, 124; 2007, 140–41; 2012; Roaf 2007; 2012a; 2012b; Kroll 2012a). Roaf takes the stance that not only did Rusa E rule before Argišti R, but the most likely order of succession was Sarduri A, Rusa E, Rusa S, then Argišti R (Roaf 2007, 2012a, 2012b). To summarize, the argument rests on three points: the evolution of royal iconography, the identity of the founder of the fortress of Rusahinili/Toprakkale, and connections to the events in Muṣaṣir.

The first argument for Rusa E's earlier dating relies on the stylistic features of lions and bulls on shields and other bronze objects from Rusa E and his Urartian noble peers (Seidl 2004, 124). Lions depicted on Rusa E's inscribed and decorated objects have short bodies as well as tufts of hair on the mane, while the end of the tails resemble those of the earlier Sarduri A and Argišti M and are dissimilar to those of Rusa S and Rusa A (Seidl 2004, 124). Lions of Rusa E have a specific and unique feature of double cusps along the legs that are missing from those of Sarduri A and Argišti M (Seidl 2007, 140–41). These combinations of features triangulate the stylistic dating after the tenures of Sarduri A and Argišti M but before Argišti R. Seidl does not attempt to determine the order of Rusa E and Rusa S in this period (Seidl 2012, 181).

The fortress of Toprakkale, named Rusahinili by its eponymous Urartian founder, contains inscriptions on tablets and bronze objects by Argišti R and Rusa E (Seidl 2004, 42–43; Salvini 2007). While no monumental stone inscription originates from the site itself, at the nearby artificial reservoir of Kesis Göl several fragments from stone inscriptions boast of how a king named Rusa built the lake and the canals that bring water into its basin (Belck and Lehmann-Haupt 1892; Lehmann-Haupt 1926, 42–45). While Belck and Lehmann-Haupt believed Rusa S was the king in the inscription, a recent discovery of corresponding fragments and parallel texts has established that the Rusa in these texts was Rusa E, confirming that he was the founder of Rusahinili (Salvini 2002; Seidl 2012, 178). In addition, the inscription does not provide a qualifier to the name Rusahinili, which indicates there was not a pre-existing fortress founded by an earlier

king Rusa. Thus, the fortress of Rusahinili Eidurukai (modern Ayanis) by Rusa Argišti must post-date the Rusahinili (E)'s founding (Çilingiroğlu and Salvini 2001).

While Sargon II's eighth campaign describes his attack on Ursa, it does not specify which Urartian named Ursa (Rusa). Details from Rusa's reign and Assyria's relationship with the ruler Ursa assist in determining which Rusa was Sargon II's adversary. First, when Sargon II ascended the throne, Rusa had transgressed against Urartu "before my [Sargon II's] time,"[21] indicating Rusa had ruled for at least eight years prior. Second, in Sargon II's march through Urartu after his defeat of Rusa's armies, he says he "went to Arbu, Rusa's ancestral city, and to the city Riar, the city of Ištar-duri [Sarduri]."[22] The juxtaposition between the ancestral home of Rusa and the city of Sarduri implies distinct family trees, as the ancestral home of Rusa S would presumably be the city of Sarduri (Roaf 2012a, 200). Rusa E's father, Erimena, was never an attested ruler of Urartu and would not necessarily descend from the Sarduri family tree.

Further evidence that supports Rusa E's forceful takeover of Urartu is an inscription on a statue of Rusa from Muṣaṣir, reported in Sargon II's Letter to Aššur. The engraving allegedly read, "With the help of my two horses and my *groom*, I personally obtain the kingship of the land Urartu."[23] The Assyrian text does not specify which Rusa, but Rusa E overthrowing the ruling dynasty is consistent with him obtaining kingship by force versus coronation by his father. Finally, in the Topzawa Stele, the king erecting the text is Rusa Sarduri (Boehmer 1978). Although there is some debate over the exact

[21] RINAP 2 65: 92
[22] RINAP 2 65: 277
[23] RINAP 2 65: 403-404

timing of the event described in the stele, the most likely date is 713 BCE (Roaf 2010, 79; this volume, 89). If the suicide of Rusa that Sargon II boasts was based in reality, the death of a king named Rusa occurred in 714/713 BCE (Roaf 2012b). Thus, the Urartian king ruling after the death of Sargon II's adversary Rusa is Rusa S, creating a chronology of Sarduri A, Rusa E, Rusa S. Rusa E may have been a usurper to the throne or ascended through a different process not seen in the available texts.

Soon after Sargon II's campaign into Iran, the Assyrian sources speak of a new Urartian king, Argišti. A vassal of Sargon II, Mutatallu of Kummuhi, allied with the Urartian king and revolted against the Assyrian monarch (Fuchs 1994, 112–13). This event occurred sometime between 710 and 708, as Sennacherib, as crown prince, reports on the vassal's treachery to his father Sargon II in Babylon (Fuchs 2012, 137). The absence of an emissary of Mutalllu during Sargon II's battle at Bit-Jakin in 709 BCE suggests that year for the date of separation (Fuchs 1994, 384). The Argišti in the Assyrian sources undoubtedly corresponds to Argišti, son of Rusa (Kroll et al. 2012, 18). After the short interval between king Rusa and Argišti of only five years, it is decades before Assyrian inscriptions mention another Urartian king. Direct conflict between Assyria and Urartu ceased after Sargon II's eighth campaign until 673 BCE, likely precipitated by the seemingly ineffective Assyrian campaigns and the rise of a mutual adversary, the Cimmerians (Fuchs 2012, 142).

In a series of letters that Sennacherib sends to his father Sargon II during this time, the Assyrian crown prince describes attacks by a foreign group, the Cimmerians, against the Urartians. While the exact date of the letters is unknown, the attack almost

certainly occurred after Sargon II's eighth campaign and once Argišti ascended to the throne (Fuchs 2012, 155–56). In two letters, Urzana, king of Muṣaṣir, is mentioned as ruling in his kingdom and reporting to the spies and agents of Assyria about the Cimmerian army's movement to attack the Urartian king.[24] While Urzana's letter aligns the Muṣaṣirian ruler's reign with the Cimmerian invasion, curiously, SAA 5 145 describes the king of Urartu as Sarduri, ruling from Tušpa. This complication requires either a misattribution of the Urartian king's name or implies that the Cimmerians invaded far earlier, somehow predating Rusa's rule and Sargon II's eighth campaign. The latter interpretation has no other evidence to support that sequence of events, so we must assume the king's name was simply incorrect. Regardless, the king ruling over Urartu during the Cimmerian invasion is most likely Argišti R (Fuchs 2012, 155–57). Although early scholarship attributed the end of Urartu to this time, the son of Argišti R reappears in the Assyrian texts a few decades later.

In texts from his reign, the Neo-Assyrian king Esarhaddon (681-669 BCE) describes his conquest over the land of Subria and records sending Urartian prisoners to Ursa/Rusa, king of Urartu (673/672 BCE) (Fuchs 2012, 137). The Rusa in this text must refer to Rusa, son of Argišti, known from over a dozen Urartian royal inscriptions (Salvini 2008, 563–92). However, not long after this account, the Urartian Empire seems to become irrelevant. In an epigraph of Aššurbanipal detailing his victory over the Elamite king Teumann, the king of Urartu, Rusa, sent emissaries to the Assyrian royal court's celebration (652 BCE) (Fuchs 2012, 137). In 646 BCE, the Assyrian report an

[24] SAA 5 144, SAA 5 145

Urartian king named Ištar-duri (Sarduri) sent tribute to the Neo-Assyrian king Aššurbanipal (Fuchs 2012, 138). In the Assyrian text, Sarduri is no longer an equal but a subservient kingdom forced to submit to the larger and more powerful Neo-Assyrian empire. Around this time, the existence of the Urartian state seems to cease, although no exact date provides a definitive endpoint. The growing Median and Babylonian empires and migratory forces from the east eliminated the independent Urartian state. In Neo-Babylonian texts, a geographic entity named Uraštu, thought to relate to Urartu, appears, although it has no political structure of note (Horowitz 1998, 20).

The construction of fortresses and accompanying royal inscriptions reveal the pattern and chronology of the Urartian empire's imperial expansion, beginning around Lake Van and eventually spanning an area from the central Zagros Mountains to the Caucuses. The kings of Urartu established their power and grew the empire by constructing large, imposing fortresses across the landscape as they subdued local leaders and levied new governmental systems over the people (Zimansky 1985; Smith 1996). Urartu's empire spread from its power base around Lake Van, first towards Lake Urmia, then to the northeast, to Armenia, before continuing further west and northwest in Anatolia. This order of growing control is documented reasonably clearly by the stone inscriptions of the kings. Two types of inscriptions serve as physical signifiers of Urartian power, building inscriptions and stone stelae. Building inscriptions, most often built as part of Urartian fortresses, correspond with semi-permanent administrative control and integration into the empire, while stone stelae are more often associated with campaigns in areas outside the direct control of the state (Kroll et al. 2012).

The first Urartian king, Arame, is known only from Assyrian accounts, and no texts in Urartu exist that would help locate the extent of Urartu during this time or the exact location of his apparent capital Arzaškun. The next recorded king of Urartu, Sarduri L, founded the capital from which all subsequent kings would rule. At Tušpa, the modern site of Van Kalesi near Lake Van, the capital of the emerging Urartian state, Sarduri placed building inscriptions, written in Assyrian, establishing himself as the first Urartian king to rule from the city (Salvini 2005). Sarduri L erected another eight inscriptions, written in Assyrian, on stock blocks around Lake Van (Salvini 2008). Given these physical markers, Sarduri L's power seems to be concentrated around Lake Van, although he and his armies may have campaigned further afield.

Sarduri L's son, Išpuini, commemorated many building activities on inscriptions around Lake Van.[25] As discussed, in many of the inscriptions of Išpuini, his son Minua's name also appears. These dual texts that share both names are almost certainly from the later part of Išpuini's reign; thus, texts with only Išpuini's name may signify an earlier time in his tenure. The texts that bear only Išpuini's name are limited geographically to the Lake Van basin and do not include any military campaigns (Kroll et al. 2012, 13). However, the inscriptions of their joint military campaigns show the quick spread of Urartian power during this time.

If building inscriptions reflect the core of Urartian control and power, the military inscriptions indicate the kings' maximal range of influence and activity. Four inscriptions, in three far apart locations, show the newfound influence of the kingdom. To the north,

[25] CTU A 2-2 – 2-7

dual inscriptions at Toprakkale and Pirabat, just south of the Araxes River in modern Turkey, boast of victory against the enemy kings of Etiuhi (Salvini 2008, 131–38). To the northeast, in Nakhichevan, the Urartian royals erected a rock inscription with their accomplishments at Ojasar Ilandagh (Salvini 1998; 2008, 137). Far to the south, in the southern reaches of the Lake Urmia basin, at the site of Taraqeh, an unpublished and now destroyed inscription may indicate a southern extent of campaigning (Kroll et al. 2012, 13). Not far away, at Qalatgah fortress, a building inscription by both rulers shows an expanded sphere of control (Muscarella 1986).

One further inscription that sheds light on the extent of Urartian control during this period and the relationship between Urartu and Muṣaṣir is the Kelishin Stele. This stele was erected on the Kelishin Pass, dividing Sidekan in the west from Lake Urmia to the west. Its existence became known during the travels of Frederick Schulz in 1827, although he was killed during a subsequent expedition before he could publish the text (Baillie and Bentley 1856; Benedict 1961, 359). Jacque de Morgan published the first copy of the text in 1893 (de Morgan and Scheil 1893). Although multiple scholars in the 19th century attempted translations after Schulz, Belck and Lehmann-Haupt created the first fully legible and translatable copies (Lehmann-Haupt and Belck 1893; Lehmann-Haupt 1910). The stele, still standing during the expeditions of these Western travelers, describes a pilgrimage by Išpuini and Minua to the kingdom of Muṣaṣir and the Temple of Ḫaldi (Mayer 2013, 11–47). This text, neither a campaign inscription nor a building inscription, is unique and reveals the special relationship between Urartu and Muṣaṣir. Muṣaṣir existed at the far spatial edges of the empire but held great importance for the

Urartian rulers. The god Ḫaldi appears for the first time as the primary god with whom the dynastic rulers pledge fidelity in the Kelishin inscription and other inscriptions from Išpuini's reign. The correlation between Urartu's quick expansion under Išpuini and the elevation of Ḫaldi holds clues to the importance of Muṣaṣir.

Minua, ruling as king after his father's demise, created many new buildings, marking his accomplishments with accompanying inscriptions. He carried out many building projects, including a 50 km canal, clustering around Lake Van (Salvini 2008, 181–270). This prodigious construction spree around the lake was supplemented by building inscriptions at Qalatgah and nearby Ezdaha Bulaqi, abutting Muṣaṣir and roughly following the main route from Lake Van to Kelishin (Salvini 2008, 181). Not content to expand the Urartian base of economic power, his campaign inscriptions reach even further than those he shared with his father. One dedication in Palu, in the mountains around the headwaters of the Euphrates River, indicates an even further westward extension of Urartian power. These inscriptions under Minua are a physical manifestation of the growth of the Urartian Empire, explaining, in part, the uptick of Assyrian aggression towards Urartu at the end of the 9th and beginning of the 8th centuries BCE.

While the Assyrians launched campaigns against Minua's son Argišti, the Urartian king expanded the empire to the northeast and southeast. In the northeast, multiple Argišti stone inscriptions record military campaigns around the Araxes Plain (modern-day Armenia and Azerbaijan) and Lake Sevan. His extension of permanent Urartian control to this area is described in his annals, documenting the construction of

two fortresses, Arinberd and Aramvir, around the Araxes Plain (Salvini 2008, 332–45). His annals also document fifteen years of campaigns, traveling as far north as Etiuni. During Argišti's reign, he also engaged in campaigns against the Manneans, located to the southeast of Lake Urmia. Between 772 and 767 BCE, Argišti and his armies attacked the Manneans, commemorating one of these campaigns in a stone campaign inscription at the site of Javan, east of Lake Urmia (Salvini 2008, 350). While conducting these campaigns, Argišti fought with Hati, the Central Anatolia state to the west that grew out of the ashes of the previous Hittite Empire (Salvini 2008, 332–45; Kroll et al. 2012, 14–15). At the same time, the Urartian king duplicated the Assyrian style annals, suggesting a desire to copy and be seen as equals with their neighbor. This expansionary phase established Urartu's position as a major power in the region.

Sarduri A continued Urartian expansion and campaigned aggressively against the empire's neighbors. Despite the military incursion of Tiglath-pileser III into the heart of Urartu, the kingdom retained its strength (Fuchs 2012, 136). Campaign inscriptions at Izoli, far to the west, and Seqindel, east of Lake Urmia, display the continued wide range of power and growth of the empire's boundaries (Salvini 2008, 411). In Sarduri A's annals, the only other example of this written form in Urartu, the king lists the many kingdoms in the region he attacked and defeated (Salvini 2008, 413–41). Sarduri A, much like his predecessors, documented the construction of new agricultural facilities and even a new city, Sardurihinili (Çavustepe), in the Lake Van area (Kroll et al. 2012, 16).

Following Sarduri A was the rule of Rusa, in all probability Rusa E, followed by Rusa S. From the Assyrian accounts, the Urartian empire was at a zenith during this time.

Although the Urartian inscriptions shed some light on the extent of the empire, the inscribed objects of Rusa S and Rusa E are more informative about the dynastic dynamics occurring during the period. Neither king left a significant number of known inscriptions, supporting Roaf's theory that both Rusas ruled in the short period previously thought to only contain Rusa S's reign (Roaf 2012a).

Rusa E built and renovated the two fortresses of Aramvir and Arinberd, although he did not use the title of king or found these sites, and the lack of titles occurs in texts of kings with more established royal lineage (Salvini 2008, 629–30; Roaf 2012a, 189). These fortresses, centered around the somewhat new secondary power center of the Araxes River, accompany limited building activities near Lake Van. With the discovery of new fragments of the Kesi Gol stele, the irrigation canal associated with the massive fortresses at Toprakkale, containing Rusa E's name, he is now the agreed-upon progenitor of that site, Rusahinili (Salvini 2002; Roaf 2012a, 191; Seidl 2012, 178). This limited number of inscriptions for Rusa E is of a similar quantity for Rusa S. Two inscriptions from around Lake Sevan, at Tsovinar and Nor Bayazet, describe the defeat of local rulers and installation of a governor to rule over this territory (Salvini 2008, 495–97). Apart from a small inscription found near Lake Van, the only other inscription of note is at Mahmudabad Tepe, near modern Urmiyeh (Salvini 2008, 509). A trio of parallel inscriptions from Mergeh Karvan, Movana, and Topzawa may have been erected by Rusa S, following Roaf's new interpretation and Salvini's original reconstruction (Salvini 2008, 497–505; Roaf 2012a, 191). The content of the inscription is discussed in more detail below, but it is likely associated with a reconquest of Muṣaṣir by an Urartian

king. By the end of this period of Rusas (ca. 724-708 BCE), Urartu seems to regain its control over Muṣaṣir.

Argišti, son of Rusa (S or E under debate), built extensively across Urartu and erected stelae that celebrated his achievements. Although no campaign inscriptions like those of previous rulers demarcate the furthest extent of Urartian campaigning, his building inscriptions boast of his military achievements over his enemies (Kroll et al. 2012, 18). Specifically, two large stelae erected in the Lake Van area commemorate the foundation of a new town, eponymously named, and an associated irrigation project (Salvini 2008, 535–40). While the Assyrians reported that during Argišti's reign the Cimmerians defeated the Urartian Empire, Argišti's inscriptions attest to the continued existence and flourishing of the empire in the mountains.

Far from a struggling empire in decay, the long inscription at Ayanis from Rusa A depicts a thriving Urartu with military campaigns and building operations. This long inscription, carved into the walls of a *susi*-temple, describes military victories against Assyria, Etiuni, Tabal, Hate, and Phrygia, adversaries that spanned from the eastern to the western borders of the Urartian Empire, reflecting the continued strength and size of the kingdom (Salvini 2008, 567–70). The inscription also contains dedications and references to massive building projects undertaken throughout the empire. The main inscription at Ayanis has parallel copies at Karmir Blur, Adilcevaz, and Armavir. Even in the 7th century, Urartu maintained its strength. However, not long after Rusa's reign, the dynasty seems to fall. The exact date of the collapse of Urartu is unknown, but the archaeological continuity ends sometime in the mid 7th century.

Muṣaṣir

With the main temple of the god Ḫaldi, the chief deity of the Urartian pantheon, Muṣaṣir held a revered place for its Urartian neighbors and the people of Assyria. Its probable location, the modern subdistrict of Sidekan and the village of Mudjesir, lay in the mountainous and relatively inaccessible valleys between the two larger empires. Apart from Thureau-Dangin's early interpretation of Sargon II's "Letter to Aššur" in detailing his campaign against Rusa and Muṣaṣir, every subsequent scholar's interpretation of the kingdom's location places it in this general area (Thureau-Dangin 1912; Zimansky 1990; Radner 2012). This view relies primarily on two stone stelae in the Sidekan area, at Topzawa and Kelishin. The bilingual Urartian-Assyrian text of the Kelishin Stele describes a pilgrimage to Muṣaṣir and the Ḫaldi Temple by the Urartian king Išpuini and his son Minua (Salvini 2008, 141–45; Mayer 2013, 11–47). The similarly bilingual Topzawa Stele corresponds to parallel inscriptions at Movana and Mergeh Karvan, erected on the western piedmont around Lake Urmia, along the route between Lake Van and Kelishin (Mayer 2013, 49–108) Although the stele was known when Thureau-Dangin published his edition of the Letter to Aššur, he did not have access to a published version of the translation. Thus, the location of both stelae in the area of Sidekan is the most convincing piece of evidence for the kingdom's location.

Lehmann-Haupt's record of his travels through the region in the early 20th century first documented the Topzawa Stele, located in the modern village of the same name, along its eponymous river (Lehmann-Haupt 1926, 299–325). The Topzawa Stele offers an example of an Urartian king traveling to Muṣaṣir, detailing Rusa S's capture or

recapture of Muṣaṣir and subjugation of Urzana, king of Muṣaṣir (Mayer 2013, 49–108). The text of the Kelishin and Topzawa stelae, along with geographical details contained in Sargon II's eighth campaign account, provide extensive evidence for this location. Reconstructing a location for Muṣaṣir far from the location of the two stelae requires academic gymnastics and supposition. Chapters 4 and 5 provide the archaeological evidence that supports this location.

Historical details about Muṣaṣir's original founding are unknown, though archaeological records may help provide insight into its early history. The earliest textual references to the kingdom rely on equating the earlier toponym of Muṣri to Muṣaṣir. Assuming these refer to the same geographic area, the first mention of the kingdom comes from a tablet of the Middle-Assyrian king Adad-nirari I (1295-1264 BCE), in which he describes his predecessor Aššur-uballiṭ I (1365-1330 BCE) as the "subduer of the land Muṣru."[26] The next Assyrian king to boast of conquering the kingdom comes from Shalmaneser I (1274-1245 BCE). This tablet also contains Shalmaneser I's boast of subduing Muṣri and destroying "Arinu, the holy city founded on bedrock."[27] More than a century later, a text of Tiglath-pileser I (1114-1076 BCE) provides another probable mention of the mountain kingdom.

In contrast to the brief mentions of Muṣri in his predecessors' texts, Tiglath-pileser I devotes 56 lines to the description of his battle against Muṣri. In the process of defeating Muṣri by burning, razing, and destroying their cities, a land named Qumanu

[26] RIMA 1 A.0.76.1: 31
[27] RIMA 1 A.0.77.1: 47-54

came to the assistance of Muṣri. Tiglath-pileser fights them in the mountains and at Arinu, located "at the foot of Mount Aisa."[28] After the apparent defeat of the Qumanean force assisting Muṣri, the whole of Qumanu rose, 20,000 strong, to fight the Assyrians. Tiglath-pileser I describes defeating them and breaking up their force at Mount Harusa, at the border of the land of Muṣri.[29] Finally, he destroys the city of Hunusu, making it look like a "ruin hill created by the deluge,"[30] and lays stones with inscriptions of his conquest on the razed city. The text is unclear whether the city Hunusu belongs to Qumane or Muṣri, though the preceding passage's description of battles against Qumanean forces suggests Qumanean ownership.

Tiglath-pileser I and Shalmaneser I's respective campaigns against Muṣri contain references to the city of Arinu. While the texts referenced Arinu in the context of Muṣri, neither kings' text specified if the settlement was part of Muṣri or merely nearby. In arguing that Arinu was part of Muṣri, Radner (2012, 246) notes the similarities between the Hurrian word for "city," *arte-ni*, the Middle Assyrian place named Arrinu, and the Urartian name for Muṣaṣir, Ardini, as evidence for a connection. Apart from the linguistic similarities, the most convincing contextual evidence linking Middle Assyrian Arinu and Urartian Ardini is Arinu's epithet as a holy city, a core characteristic of Iron Age Muṣaṣir. The Ḫaldi temple at Muṣaṣir was a signatory of its religious importance. This connection between Arinu and Ardini would indicate the ascendance of Ḫaldi and the temple at Muṣaṣir as early as the 12th century BCE.

[28] RIMA 2 A.0.87.1: 77
[29] RIMA 2 A.0.87.1: 82-95
[30] RIMA 2 A.0.87.1: 99

While a connection between Arinu, Ardini, and a holy city is intriguing, additional ambiguities in the connection of Muṣri and Arinu to Iron Age Muṣaṣir raise doubts. Although Radner (2012, 246) assures the reader of a connection between Muṣaṣir and Muṣru, given the names' similarities, she notes that Assyrians also use the word muṣru to denote a "borderland," such as the Assyrian name for the western borderland of Egypt.[31] This does not suggest Shalmaneser I or Tiglath-pileser I fought an Egyptian force. Instead, the designation of Muṣru could have generally referred to the mountainious eastern borderlands, encompassing the area of Iron Age Muṣaṣir and its surrounding environs. A further complication of the linkage between Arinu and Ardini is the existence of a place called Aridu in an inscription of Shalmaneser III (858-824). In Shalmaneser III's accession year, he engaged in a campaign against Aramu the Urartian, capturing the fortress of Aridu and passing through Hubuškia on his way east.[32] While debated, Hubuškia likely lay around Sidekan or in the valleys to its southeast (Chapter 7). Thus, Aridu in Shalmaneser III's text was likely around Muṣaṣir, suggesting either Arinu evolved into Aridu over three centuries or Aridu was an Assyrian interpretation of Urartian Ardini. Although the available evidence does not confirm the connection between Arinu's holy city and Muṣaṣir's Ḫaldi temple, the linkage is likely.

Following Shalmaneser I's rule, during the period of Assyria's contraction between the Middle and Neo-Assyrian periods, king Aššur-bel-kala (1073-1053 BCE) writes of fighting Arameans numerous times on a stele at Aššur. Among those constant

[31] AHw 659 "miṣru" ; CAD M/II 113-115.
[32] RINAP 3 A.0.102.1: 14-33

battles, the text says, "he uprooted the troops of the land Muṣri,"[33] before describing a campaign against the Arameans on the Tigris River. The latest reference to Muṣri comes at the start of the Neo-Assyrian period, in a tablet of Aššur-dan II (934-912 BCE). Muṣri is written in this account as *KUR.mu-us-ra-a-ia*.[34] Although the writing of this land is not sufficient to prove its connection, the preceding and succeeding entities provide convincing circumstantial evidence. Before the mention of Muṣri, Aššur-dan II is in Arbela with a defeated enemy;[35] he follows up his attack on Muṣri by marching past Mount Kirriu and conquering a city called Simerra.[36] The references to Muṣri over the centuries do not provide insights into the inner working of the kingdom, or even its general structure, but do establish some degree of connection between the entity and the kings of Assyria on the plains of Mesopotamia and the chronological stretch of the kingdom. Following the connections of Arinu, Aridu, and Muṣaṣir, the other implication from these early references is that the kingdom was home to some religious cult center as early as the 13th century BCE.

The first reference to the kingdom as Muṣaṣir comes only a few decades later, on the so-called "Banquet Stele" of king Aššurnasirpal II (883-859 BCE) (Mallowan 1966, 57–73; Oates and Oates 2001). The stele commemorates the celebration of the founding of his new city of Kalhu, boasting of over 60,000 celebrants and foreign dignitaries who traveled to pay their respects. Among them are envoys from Hubušku, Gilzanu, and

[33] RIMA 2 A.0.89.7: iii 10b
[34] RIMA 2 A.0.98.1: 42
[35] RIMA 2 A.0.98.1: 40
[36] RIMA 2 A.0.98.1: 54-56

Muṣaṣiru.[37] The Assyrian king boasts that his domain includes territories that border the passes of Mount Kirruru, mentioned in the texts of his predecessor Aššur-dan II, and Gilzanu, [38] often thought to be in the region of Hasanlu, southwest of Lake Urmia (Reade 1978). The lengthy list of foreign entities is indicative of Aššurnasirpal II's power as well as the relative status of Muṣaṣir. In none of the other translated texts of Aššurnasirpal II does he mention Muṣaṣir or indicate a military campaign against the kingdom.

Under Aššurnasirpal II's son, Shalmaneser III (858-824 BCE), the Assyrian empire attacked and brought destruction upon Muṣaṣir. One campaign attacks Muṣaṣir specifically, though the king executed multiple military operations in the region. In Shalmaneser III's 31st regnal year (827 BCE), he sent his general, Dayyan-Aššur, on a campaign against Muṣaṣir and other enemies in the Zagros Mountains. The general and Shalmaneser III's armies pass through Hubuškia, receiving tribute, before capturing Zapparia, the "fortified city of the land of Muṣaṣir," along with 46 cities of Muṣaṣir.[39] He continues through to Gilzanu and other toponyms on the Iranian plateau. Earlier in Shalmaneser III's reign, the king campaigned through this region. In his ascension year, he also passes through Hubuškia on his way to the "Sea of Nairi," after capturing "Aridu, the fortified city of Ninnu."[40] As mentioned above, this city has connections to Arinu and Ardini, linking the toponym to Muṣaṣir. Shalmaneser III's 3rd regnal year (799 BCE) describes defeating Aramu, the Urartian, at Arazškun, moving past Gilzanu and

[37] RIMA 2 A.0.101.30: 146-147
[38] RIMA 2 A.0.101.30: 14-16
[39] RIMA 3 A.0.102.16: 320'-326'
[40] RIMA 3 A.0.102.6: i 28-41

Hubuškia, and reaching Assyria by Mount Kirruru.[41] These synchronisms are vital connections for relating events on the Mesopotamian plains to the actions of the Urartians in Iran and Anatolia and creating a chronology of Muṣaṣir in the context of its larger neighbors.

Starting around the time of Shalmaneser III, historical records detailing Muṣaṣir and the surrounding region become far more voluminous, with specific details from Urartu and Assyria forming a loose outline of a historical narrative. Not long after Shalmaneser III's general attacked Muṣaṣir in 827 BCE, Išpuini and Minua made their pilgrimage to the religious center. Synchronisms between Urartu and Assyria establish that in 830 BCE, Sarduri, son of Lutbi, reigned over Urartu. Ten years later, in 820 BCE, Shalmaneser III's son, Šamši-Adad V, sent his forces against Ušpina, king of Nairi.[42] Thus, sometime in this decade Išpuini ascended to the throne. This synchronism is vital for understanding Muṣaṣir's history, as the first text originating from Muṣaṣir itself comes from Išpuini. During his reign, while his son Minua was old enough to act independently, one or both men traveled to Muṣaṣir and erected the Kelishin Stele commemorating that journey. Minua appears in many of Išpuini's texts as an apparent co-regent or crown prince (Kroll et al. 2012, 20; Çifçi 2017, 278–83). Although we cannot propose a specific year for the date of the text and associated travel, Minua's existence in the text suggests sometime later in Išpuini's tenure as king. Išpuini took control of the kingdom from Sarduri sometime between 830 and 820 BCE, although the exact date of his accession is not clear from Assyrian or Urartian sources. Regardless of Išpuini's exact

[41] RIMA 3 A.0.102.6: i 57 – ii 2
[42] RIMA 3 A.0.103.1: ii 25-30

accession date, by 820 BCE, he reigned over Urartu. The date when Minua takes control from Išpuini's is not known from the textual record, however, since Assyrian records have no mentions of Minua to provide synchronisms. Regardless of the exact dates of the kings' reigns, the journey of Išpuini and Minua to Muṣaṣir in all probability occurred sometime close to the 820 BCE reference to Išpuini (Salvini 2004, 64). Assuming the journey commemorated on the Kelishin Stele occurred between 820 – 810 BCE, Shalmaneser III attacked Muṣaṣir at some point in the previous two decades.

The Kelishin Stele, with its account of travel by Minua and Išpuini, stood on the road passing over the Kelishin Pass, one of the only passages across the Zagros Mountains between Iraq and Iran. After a dedication to Ḫaldi and the Urartian pantheon, the text begins by describing a pedestal the Urartians built at the spot, in front of the inscription.[43] The pedestal in the text may also refer to the platform that served as the foundation for the stele. The texts' following lines list many objects and animals brought to Muṣaṣir and the Ḫaldi Temple. Among the items are weapons, valuables, "bronze standards… a bronze cauldron, a stadia rod," "1,112 cattle, 9,120 goats and sheep" for the temple, and "12,480 large sheep and goats as votive offerings."[44] The text ends with a curse against anyone who would dare remove or destroy the inscription.[45] While the inscription describes the Urartians making "a pleasing pedestal to Ḫaldi at the top of the road,"[46] the text also says Išpuini erected words in front of the Temple of Ḫaldi, in the

[43] CTU 1 A 03-11: o5-6
[44] CTU 1 A 03-11: 14-18; o7-11
[45] CTU 1 A 03-11: o37-41
[46] CTU 1 A 03-11: o5-6; (Mayer 2013, 46)

Assyrian version, and inside the temple, in the Urartian version,[47] suggesting a copy of the text likely existed at the Temple of Ḫaldi at some point, although thus far undiscovered.

Figure 2.1: Kelishin Stele, Urartian Text (Benedict 1961, 375)

[47] Assyrian: CTU 1 A 03-11 o17-19; Urartian: 20-22

Although the text does not note a reconquest or conquest, the proposed timing of the pilgrimage, soon after Shalmaneser III's conquest, establishes the trip as at least a symbolic assertion or reassertion of Urartian power. Neither the Kelishin Stele nor any preceding Assyrian texts provide insights on Muṣaṣir's allegiance before this time, apart from Assyrian campaigns against the area that reveal little about the kingdom's political dynamics. The description of events in the Kelishin Stele provides some details about Muṣaṣir, most notably the preexistence of the Ḫaldi Temple and the Urartian kings' reverence for it. A reconstruction of additional events, however, is possible through circumstantial evidence.

In the Kelishin Stele, for the first time, Ḫaldi is referred to as the preeminent god of Urartu. None of Sarduri's inscriptions reference a god; Ḫaldi's name appears for the first time under Išpuini and Minua (Salvini 2008, 95–271). In their inscriptions, including the Kelishin Stele, Ḫaldi is the first god mentioned and the focus of their dedication. The main text for understanding the Urartian religion and their pantheon of gods comes from this same period of rule with Išpuini and Minua: the "door" text of Meher Kapisi, nearby Lake Van. The text is dedicated to Ḫaldi, representing the rock niche as a metaphorical door for the god to visit. Ḫaldi is the first god listed in the long list of deities, followed by the "Weather God, the Sun God, and the Assembly of Gods."[48]After a brief dedication to those four gods, the text lists every conceivable god in the pantheon.[49] Salvini believes

[48] CTU 1 A 03-01: 1-3
[49] CTU 1 A 03-01: 5-23

the establishment of the Urartian pantheon, as mapped out on at Meher Kapisi, likely occurred after the events described in the Kelishin Stele (Salvini 1994).

With this context, the content of the Kelishin Stele is especially crucial for understanding the growth and spread of Urartu. The inscription refers to Minua and Išpuini traveling to Ḫaldi's temple, necessarily the most important temple in Urartian religion, given the god's position at the head of the pantheon. Under Išpuini and Minua's reign, southern Urartian terriortial expansion had only recently reached southern Lake Urmia and the Kelishin Pass. The lack of previous references to Ḫaldi, combined with the apparent distance of Muṣaṣir from the Urartian capital around Lake Van, raises questions about the identity of the rulers themselves. After Išpuini's rule, references and dedications to Ḫaldi abound throughout the empire, with all kings noting their devotion to the god and dedicating the major building projects in his name. Did Išpuini decide to elevate Ḫaldi to the top of a growing pantheon of Urartian gods or was the Kelishin Stele simply an affirmation of Ḫaldi's rightful place at the head of the pantheon for the Urartian dynastic rulers? From Mehr Kapisi and his encyclopedic study of Urartian texts, Salvini deduces that the Urartians seem to integrate local gods into their pantheon as they conquer new regions, and many of the gods were anthropomorphized representations of geographic locations, like mountains.[50] While Ḫaldi's name does appear in Assyrian texts before this, Muṣaṣir and Ḫaldi do not seem to be of a high degree of importance. Determining the relationship between Muṣaṣir and the elevation of Ḫaldi is a core question driving this study and is discussed further in Chapter 7.

[50] CTU 1 A 03-1: 44 – "1 ox and 2 sheep for the god Adaruta" representing the mountain Andarutta.

As Urartu's territory grew to the west and east under Išpuini, his son Minua, and then Argišti, Muṣaṣir goes mostly quiet in the historical record for a few decades. In Argišti's twelfth year, he writes that the land Etiuni, an enemy of Urartu, "wanted to loot *aštiuzi* in the city Ardini," and in response, he set off to that land to conquer his enemies (767 BCE) (Fuchs 2012, 151).[51] While the text itself provides no details on the relationship between Urartu and Muṣaṣir, it does establish Urartu's continued support and suggests the kingdom's continuing quasi-independence. Under two Neo-Assyrian kings following Argišti's reign, Aššur-nirari V (754-745 BCE) and Tiglath-pileser III, Assyria launched campaigns against Urartu, though without reference to Muṣaṣir. Argišti's son, Sarduri (756-730 BCE), reigned as king of Urartu during these Assyrian incursions. Under the next Neo-Assyrian king, Sargon II (721-705 BCE), relations between Urartu, Muṣaṣir, and Assyria increased in frequency and violence.

Although Sargon II's eighth campaign, recorded in his Annals as well as in detail on a clay tablet referred to as the "Letter to Aššur,"[52] provides the most famous and detailed account of Muṣaṣir, several letters between his agents in the mountains and imperial administrators provide contextual details about not only the kingdom's political interactions but historical and chronological facts. The eighth campaign, in 714, provides the most detailed description of relationships between these empires and Muṣaṣir, in addition to supplying information about the kingdom itself and valuable evidence on

[51] CTU 1 A 08-3: v41-47
[52] References to the eighth campaign refer to Sargon II's "Letter to Aššur" text, RINAP 2 65.

dating. With this data, the decades surrounding Sargon II's invasion are the most informative period of Muṣaṣir's history.

A wealth of correspondence from Assyria, specifically during Sargon II's reign, provides a different perspective on the events occurring in the major inscriptions of the day. However, of the at least eleven texts mentioning Muṣaṣir, none seem to predate the Assyrian occupation of the kingdom in Sargon II's 8th year. Sargon's Annals, on the walls of his palace at Khorsabad, describe the events that led to the eventual invasion of the Iranian Plateau in 714 BCE (Fuchs 1994). In part, conflict with Urartu over proxy control of Mannea led to the massive invasion in Sargon II's eighth year. Mannea was a confederation of small city-states and kingdoms located in the vast valleys south of Lake Urmia (Dyson 1960). Its rulers appear to have united under one banner and identity around 800 BCE, as indicated by the new Assyrian description of this land as "Land of Manneans" (Diakonoff 2000, 65). By 720 BCE, the kingdom came into direct conflict with Urartu. Rusa incited two local rulers surrounding Mannea, Bagdatti of Uišdiš and Mettati of Zikirtu, to revolt against the Assyrian Mannean proxy Aza.[53] The brother of Aza, Ullunsunu, took over control of Mannea and pledged allegiance to Urartu. Sargon II launched a campaign to regain control of the area, plundering the Mannean capital of Izirtu. Sargon II and his forces left Ullunsunu on the throne, serving as a proxy for Assyria.[54]

[53] SgAnn: 78-79
[54] SgAnn: 86-8

Despite seemingly securing Mannea and its environs for Assyria, Rusa's continued incursions forced Sargon and his armies to return the following year. The Urartian king assaulted Mannea, leading to a loss of territory and the revolt of one of Mannea's governors, Dajukku, against the Assyrian proxy Ullunsunu. The Assyrian forces returned to Mannea, reconquering 22 fortresses of lost territory and subsequently deported Dajukku to Assyria, restoring the empire's strength and presence in the area.[55] Besides recovering lost territory, Sargon II collected tribute, erected a stele in Izirtu, and received a visit by Ianzu, the king of Hubuškia.[56] Although the campaign restored Assyrian power in the Zagros and led to the annexation of a western portion of Mannea into the Assyrian province of Parsua, the need to return to recapture territory so soon after a previous campaign led to Sargon II's decision to launch a far more extensive and more destructive campaign the following year. (Diakonoff 2000, 79–81; Roaf 2007, 199–200; Radner 2013, 2).

The texts of the Letter to Aššur and the eighth year of his annals commemorated this major campaign against Urartu, culminating in the sack of Muṣaṣir, with the Letter to Aššur providing the most detailed account. In sum, the text records the lengthy campaign of Sargon II, departing from his capital in Assyria, through Mannea, up to Lake Urmia, sacking Muṣaṣir, then returning to the Mesopotamian plains. The Letter to Aššur is one of the most studied historical texts in Assyriological scholarship, in part because of its length and detail, Sargon II's importance for the history of the Neo-Assyrian empire, and

[55] SgAnn: 101-103
[56] SgAnn: 103-113

connections to archaeological expeditions into Iran the region in the 1970s and 1980s that triggered particular interest into Sargon II's route.

The text of Letter to Aššur survives on a large tablet, bought on the antiquities market by the Louvre Museum in 1910 (Frame 2020: 273). While its original provenience was unknown, excavations at Aššur in the following decade fortuitously found a small fragment of the tablet that joined to the larger text in the Louvre, establishing its original, pre-looted provenience at Aššur (Meissner 1922). First published by French scholar Thureau-Dangin (1912), subsequent editions were published by Luckenbill (1927), Mayer (1983, 2013), and Frame (2020), with translations of large portions of the text by Fales (1991) and Foster (1993), among many others.[57] Compared to the mostly unemotional and factual retelling of Sargon II's eighth year in his Annals, the Gottesbrief text is replete with literary flourishes, embellishments, and heroic events by the king. Moreover, it is one of only three Gottesbriefs texts, along with those of Shalmaneser IV and Esarhaddon, written in a style of addressing the gods directly (Zaccagnini 1981, 264). Oppenheim argued that this type of text was to be read to the people of Assyria, informing the subjects of their leaders' power as a type of propaganda (Oppenheim 1960, 143–45). Despite the text's many linguistic flourishes, the sheer number of geographic and toponymic locations in the text form one of the most robust sources for reconstructing both toponyms' locations, including Muṣaṣir and Sargon II's route on the campaign. The eighth campaign's role as Sargon II's only known Gottesbrief

[57] Frame 2020:274-275 for a complete list of translations and editions of the text.

may also be a sign of the importance placed on Muṣaṣir and Ḫaldi, confirming his devotion to Aššur after his violence towards Ḫaldi.

Sargon II's intention in this campaign was to defeat the Urartian king Rusa in Iran, presumably to bring an end to incursions against his vassals in the mountains and flex his power against the neighboring empire. The Assyrian armies began their campaign at Kalhu, mustered at Zamua, and marched through the many peaks of the Zagros Mountains to reach Mannea and Sargon II's vassal, Ullunsunu.[58] After moving through the subservient cities and fortresses of Mannea to receive tribute and supplies, the Assyrian armies headed towards Zikirtu and Andia, allies of Rusa.[59] In the district of Uišdiš, the armies attacked and defeated the combined Urartian and Zikirtian forces at Mount Uauš.[60] Although his armies were defeated, Rusa escaped into the mountains.[61] Sargon II and his armies then plundered a long list of provinces and cities inside Urartu and allied Urartian lands. After sacking and pillaging many settlements, his armies move through the land of king Ianzu, king of Hubuškia, receiving tribute from the allied ruler.[62] At this point, the text calls out the ruler of Muṣaṣir as an oath breaker against the preeminent gods of Assyria, Aššur, Šamaš, Nabu, and Marduk, and states that he did not kiss the feet of Sargon II or even send a messenger to greet the Assyrian king.[63] He

[58] RINAP 2 65: 6-36
[59] RINAP 2 65: 76-90
[60] RINAP 2 65: 91-147
[61] RINAP 2 65: 148-155
[62] RINAP 2 65: 306-308
[63] RINAP 2 65: 309-313

claims this afront and an associated omen were sufficient cause to attack Muṣaṣir (Frame 2020:298).

Before describing the attack against Muṣaṣir, the text devotes considerable length, a full six lines, as an ode to Assyria, blessing the attack on the home of Ḫaldi.[64] At this point, Sargon II separates from his main force and moves with a small expeditionary force through treacherous mountains and over the Upper Zab/Elamunia.[65] Then the Assyrians reach Muṣaṣir, entering the city, although Urzana seemingly escapes before the Assyrian attack.[66] Sargon II sacks the city, deporting Urzana's family and citizens of the kingdom.[67] The text describes the "removal of the gold Ḫaldi,"[68] and that Sargon II "had (him) sit in front of his (city) gate."[69] Whom Sargon II had sit in front of the gate is unclear from the text, debated as either the statue of Ḫaldi or Urzana, although the earlier portion of the text notes that Urazana escaped before the Assyrian attack (Frame 2020:301). As Sargon II exits Muṣaṣir, later in the text, he describes carrying away "his god Ḫaldi (and) his goddess Bagbartu,"[70] supporting that the god sat in front of the city gate.[71]

Following the sack of the city and the temple of Ḫaldi, the text spends 52 lines describing in detail the amount and types of loot the Assyrians take away from the temple

[64] RINAP 2 65: 314-319
[65] RINAP 2 65: 320-332
[66] RINAP 2 65: 333-336
[67] RINAP 2 65: 343-349
[68] RINAP 2 65: 347
[69] RINAP 2 65: 348
[70] RINAP 2 65: 422
[71] One additional piece of evidence arguing for carrying away Haldi is a broken passage in SAA 1 007 in the context of Musasir, of "seiz[ing..] of your gods" although without additional information.

and Urzana's palace, totaling over 300,000 objects.[72] In the deportation of Muṣaṣirian citizens, Sargon II allegedly took away 6,100 people, 12 mules, 380 donkeys, 525 cattle, and 1235 sheep.[73] The Assyrians plundered all varieties of expensive and rare goods from the temple, from gold and silver vessels to richly decorated weapons dedicated to the gods and statues of Urartian kings and gods.[74] The quantity and quality of goods listed attest to the importance of Muṣaṣir but also to the fact that pilgrims, including the Urartian kings, brought enormous quantities of valuable objects as votive gifts to Ḫaldi.

Sargon II states that when Rusa of Urartu heard of the destruction wrought upon his most sacred locations, the latter called out in anguish and angrily hit himself.[75] While earlier translations describe Rusa's suicide, it is unlikely that his suicide was precipitated by the sack of Muṣaṣir (Roaf 2012b). However, the sack of the main temple of the Urartian religion undoubtedly caused consternation in the Urartian royal court at Tušpa. In the text's final phase, Sargon II and his armies depart the foreign lands, traveling through the pass of Mount Andarutta, across from the town of Hiptunu, and arrive back in Assyria.[76]

Adding further detail to this account, a stone wall relief in Sargon II's place at Dur-Sharrukin, modern Khorsabad, has a caption stating, "I besieged and captured Muṣaṣir (Reade 1976, 98). The relief, excavated in the 19th century, was on Room XIII, slab 4, but sunk to the bottom of the Tigris River during transit (Botta 1849, pl. 141;

[72] RINAP 2 65: 352-404
[73] RINAP 2 65: 349
[74] RINAP 2 65: 352-404
[75] RINAP 2 65: 411-414
[76] RINAP 2 65: 425

Albenda 1986, pl. 133). Despite its loss, the sketch of the relief's depiction is one of the most informative pieces of evidence about not only Muṣaṣir also but the nature of Urartian architecture. It depicts three buildings, the central one believed to be the Ḫaldi temple. The building has a columned front and a pitched roof, unique in depictions of Urartian temples. On top of the main temple are six Assyrian soldiers sacking the city and carrying away their booty. The front of the temple has two large upright spears guarding the doorway, two lion-headed decorations, shields, and two large cauldrons. On the left of the relief is a stacked series of buildings built on top of a mountain. On the right is a three-tiered structure with a door at its base. This depiction not only adds context to Sargon II's eighth campaign but reveals the nature of Muṣaṣir and the Ḫaldi temple, further discussed in Chapter 7.

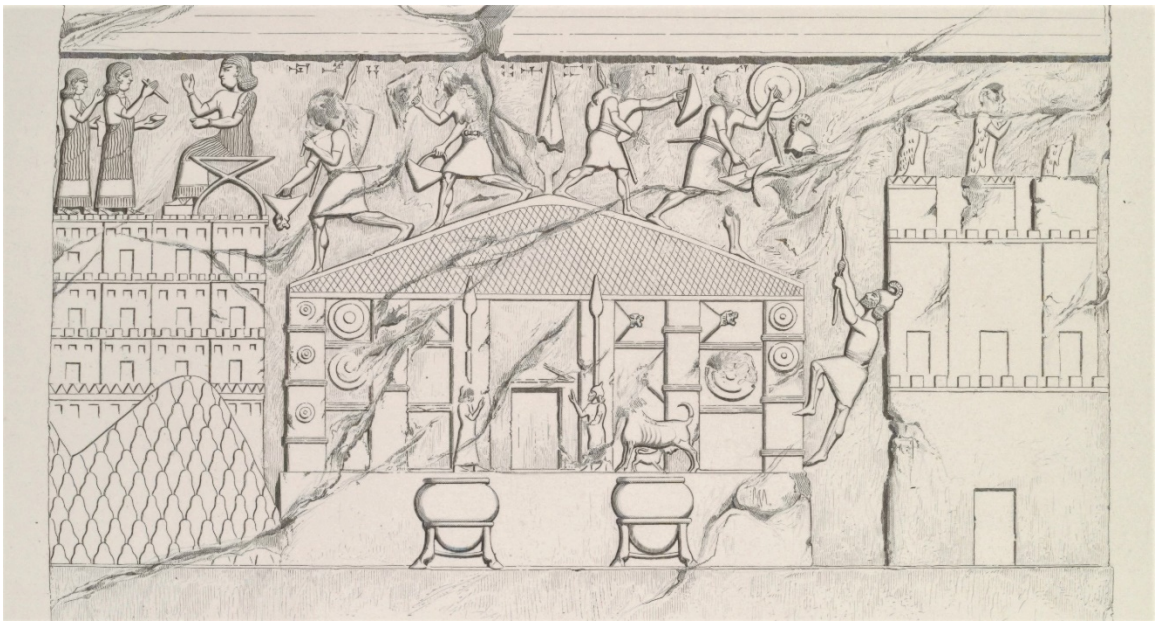


Figure 2.2: Muṣaṣir Relief. Sargon II's Palace at Khorsabad, Room XIII, Slab 4. (Image from Albenda 1986, pl. 133)

Events following the sack of Muṣaṣir in 714 BCE are conjecture, although Roaf's narrative is most compelling. A primary point of dispute is the dating of the Topzawa Stele. As previously discussed, the Topzawa Stele was erected along the Topzawa Çay in the Sidekan area, and its text contains details in both Assyrian and Urartian about Rusa S's journey to Muṣaṣir. The text commemorates the travel of Rusa, son of Sarduri, who declares in his first year, he went to Muṣaṣir. Urzana, the king of Muṣaṣir, greets Rusa and pledges loyalty to Urartu. In turn, Rusa S places Urzana as governor of the protectorate. In the Assyrian version of the text, Rusa declares that he moved into the mountains of Assyria, killing his enemies. Once entering Muṣaṣir, he sacrifices animals in honor of Ḫaldi and hosts a festival for the kingdom's people (Mayer 2013, 83–85). The Movana and Mergeh Karvah stelae add slightly more information, and their locations suggest a sort of processional journey to Muṣaṣir along the main route between Lake Van and the Kelishin Pass. In the Urartian version of the Movana stele and Assyrian version of the Mergeh Karvah stele, the mountain that Rusa forces the Assyrians from is named Andarutu, the same mountain Sargon II describes moving past to reach Assyria (Salvini 2008, 497–508).

The date of Rusa S's travel depends entirely on reconstructing the order of Rusa S and Rusa E. If one assumes Rusa S was the adversary described in Sargon II's eighth campaign, the events must occur before the sacking of Muṣaṣir, given the text commemorates the king's first year of rule. This interpretation requires the assumption that the suicide of Rusa described in the account of the eighth campaign occurred after the events of the campaign, sometime later in 714 BCE. In that scenario, the death

happened while the Assyrians occupied Muṣaṣir. Contrastingly, if Rusa E reigned after Sarduri and before Rusa S, the events described on the stelae indicate an Urartian reconquest of Muṣaṣir.

Under a reconstruction where Rusa S follows Rusa E, the Assyrian rule in Muṣaṣir lasts a short time. The only specific date that establishes activity at Muṣaṣir following the campaign is in the Assyrian Eponym Chronicle. In the year 713 BCE, a broken piece of the text alludes to something happening in Muṣaṣir, although the nature of the occurrence is unknown (Millard 1994, 47). Eleven letters from Sargon II's spies and emissaries in the mountains around Assyria report on events in Muṣaṣir, four of which mention Urzana. One letter contains a report by Urzana to Sargon II, informing him that the Urartian king is on his way to Muṣaṣir. Urzana notes that while Sargon II commanded that no one "may take part in the service without the king's permission," that "when the King of Assyria came here, could I hold him back? He did what he did."[77] The letter does not have associated contextual information confirming the date or who Urzana must hold back, but the "service" described seems to be a pilgrimage at Muṣaṣir and "he did what he did" referred to Sargon II's conquest of Muṣaṣir. Thus, the letter must describe events after Sargon II conquered Muṣaṣir but while he still reigned over the kingdom.

Two letters may describe events while Muṣaṣir is under Urartian control. In one, an Assyrian emissary reports that Urzana is traveling to see the Urartian king soon after

[77] SAA 5 147

the invasion by the Cimmerians, dating the letter after Sargon II's eighth campaign.[78] Another letter describes a man named Abalunqunu as the governor of Muṣaṣir.[79] Given that Urzana is in control during Sargon II's reign over Muṣaṣir, this may suggest the governing official held office after the Muṣaṣir reconquest. One report by Aššur-rešua relays to Sargon II that the Urartians seized Urzana and took him to Waisi in Urartu.[80] In sum, these texts, plus the Topzawa text, suggest that after the capture of Muṣaṣir by Sargon II, the Assyrians control the kingdom for one to two years. Rusa E committed suicide or, more likely, Rusa S overthrew and replaced Rusa E in response to the Urartian defeat and humiliation by the Assyrian forces. Soon after, Rusa S musters his Urartian forces and travels to Muṣaṣir, capturing the kingdom and killing any remaining Assyrian forces in the area. Rusa S's rule was short, as only a few years later, by 709, Argišti rules Urartu (Roaf 2012a; 2012b).

After this period full of historical records and mentions, the references to Muṣaṣir mostly disappear. Muṣaṣir/Ardini does not appear in any of the inscriptions of the later Urartian kings, and none of the inscriptions or letters by the later Assyrian kings mention the kingdom. However, worship of Ḫaldi by the Urartian kings continues, suggesting that the temple continued operating in the succeeding decades. Further suggestive evidence of the continuation of the cult of Ḫaldi, and possibly the temple at Muṣaṣir, comes from Assyria. Examining the prosopography of the Neo-Assyrian Empire, 17 personal names occur with the prefix "Ḫaldi." Seven of the seventeen names date to kings ruling after

[78] SAA 1 31
[79] SAA 5 84
[80] SAA 5 87

Sargon II. While three are undatable, one person, Ḫaldi-remanni, lived during the reign of Tiglath-pileser, and three others lived concurrently with Sargon II (Parpola 1998, 441–43). This continuity of names referencing the Muṣaṣirian god indicates continued worship or prominence of Ḫaldi. While this does not confirm the temple's existence, further evidence suggests an ongoing presence there.

Post-Assyrian Period – Ottoman Period

After the sack of Muṣaṣir by Sargon II, references to this area quickly taper off and disappear. While archaeological evidence suggests a moderately sized occupation during the Achaemenid Period, historical sources describing an area called Muṣaṣir are nonexistent during the period. Determining the possible identity of the region is a vital piece in reconstructing the importance and fate of Muṣaṣir. While the following section does not propose a definitive identification through the ensuing millennia, the process of combing through travelers' accounts, religious tales, and the accounts of empires is an effort to determine if this area maintained prominence during these many years. After the sack of Muṣaṣir, the area’s identity is unknown until the rise of the Sorani Emirate kingdom in 1500 CE.

After the fall of Assyria and Urartu, the last remaining preeminent state in the region was Media. According to Herodotus, Deioces united the various Median tribes into one kingdom in 678 BCE. Despite the likely embellishments of Herodotus’s account, including the misapplication of the ruler Deioces to this period, the founding of the Median kingdom, which would eventually grow to span across all of the Iranian plateau,

likely did occur around that time (Diakonoff 2000, 89–90). Deioces's grandson, Cyaxares, sacked Assyria and subsequently united the Iranian plateau under the Median Empire (550BC-330BCE) (Kuhrt 1994, 647, 656). While Herodotus's accounts described a unified Median state stretching from Anatolia to Central Asia, contemporary Assyrian accounts do not support that geographic extent (Radner 2013). Indeed, the existence of a wide-ranging Median Empire is in doubt (Diakonoff 2000; Lanfranchi, Roaf, and Rollinger 2003, 397–402).

In the context of control of northwest Iran and the existence of Muṣaṣir, the eastern extent of the Median Empire is mainly irrelevant. In 616 BCE, Mannea and its Assyrian allies fought and lost a battle against Babylon at Qablin. While Assyria regrouped, Mannea's weakness led to its defeat by Media, sometime between 615 and 611 BCE (Diakonoff 2000, 122). Mannea may have exerted some degree of independence, but by 590 BCE, when Cyaxares went to war in the west, it became fully integrated into Media as a subservient province (Diakonoff 2000, 125). Sources from Media itself during this time are limited or non-existent, and the archaeological record does little to explain the nature and extent of Media (Diakonoff 2000). Nevertheless, evidence points to the continuity of Mannea, in some form, after its integration into the Median state. During Herodotus' alleged travel of the Royal Persian road, in the 5th century BCE, during the later Achaemenid Empire, he describes a place called Matiene, located around the river crossings of the Tigris, Great Zab, Lesser Zab, and Diyala Rivers (Tuplin 2003, 363). Mannea may continue as Matiene before the Achaemenid Empire eventually consumes the polity. However, Matiene's identity is far from certain. Tuplin

proposes that either Herodotus or a later copy of his work misattributed Matiene to Media or was a wholly inaccurate term (Tuplin 2003, 363). In Strabo's account of his travels, written in the early 1st century CE, Media and Matiene [Matiani] are separate entities.[81]

Further evidence of Matiene's location around Lake Urmia, the original homeland of Mannea, comes from a contemporary of Strabo's, Xanthus, who calls Lake Urmia "Lake Matianus," and from Herodotus, who describes the Zagros as the "Matienian Mountains,"[82] clearly taking their names from the surrounding land of Matiene (How and Wells 1991, 1.72.3). These Western travelers and scholars help establish the continuity of Matiene through at least the Achaemenid Empire. If the area of Sidekan and Soran did not fall under the authority of Mateine or Media, they might have fallen under the nominal jurisdiction of the Neo-Babylonian governors in Assyria (Kuhrt 1994, 540, 589–97). Most likely, this region maintained independence from its two neighboring empires, protected by the impassable mountains on all sides.

Following the end of the Median Empire, the Persians created an empire stretching from India to Greece, including all of the Zagros region (Kuhrt 1994, 656–67). The Persian rulers bestowed administrative duties on local governors called satraps to administer this immense territory. These satraps exerted varying degrees of control over their domain, depending on the geography and ethnic makeup of the area. For example, in the Zagros Mountains, much of the territory could not be fully integrated into the state

[81] "The Cadusii border on the Medi and Matiani below the Parachoathras," Book 11, Chapter 8, 8; "this is also the case in Matianê in Media" Book 11, Ch 7, 2.
[82] Herodotus 1.189.1: "When Cyrus reached the Gyndes River [Diyala] on his march to Babylon, which rises in the mountains of the Matieni and flows through the Dardanean country into another river, the Tigris."

and existed under only the nominal control of the Persian administrative authority (Kuhrt 1994, 689–92). Thus, Sidekan and the surrounding area were likely not tightly controlled by the Achaemenid ruling authorities, regardless of which satrap's jurisdiction the region belonged to. Using Matiene as a guide, Sidekan/Muṣaṣir may have been in Herodotus' 18th satrapy, consisting of "the Matienians and Saspeirans and Alarodians," (How and Wells 1991, 1.82). However, Herodotus's account of the districts of the Achaemenid Empire may be inaccurate given his reporting relied almost exclusively on the western satraps.

Historians traveling with the Macedonian king Alexander the Great recorded in great detail the administrative systems of the Persians, as the Macedonian king tended to co-opt the existing local systems rather than create new ones. While these records of the Achaemenid Empire's come from the empire's fall during Alexander's conquest, the greater detail in these accounts suggests some amount of accuracy. This structure divides the empire into seven large satrapies with smaller subdivisions. In this organization, Matiene was part of Media, in the satrap of "Central Minor Media," bounded mostly by Parthia in the east, Elburz Mountains in the north, the Cosseans (roughly equal to modern Kermanshah) in the south, and the Zagros Mountains in the west (Bruno 2011). Given Sidekan's location along the *chaine magistrale* of the Zagros Mountains, the area may have fallen under the authority of Media or the satrapy to the west, Arbelitis/Sagartia/Asagarta, roughly equivalent to the modern Erbil province. Considerable disagreement exists regarding Sagartia/Asagarta's extent around Erbil, with opinions ranging from a vast area reaching the Caspian Sea or a province limited to

Persian domains west of the Zagros Mountains (Eilers 1987, 701). These bureaucratic designations continue through the Achaemenid Empire and Alexander's conquest until his untimely death and the subsequent division of his short-lived empire by his many generals (Schottky 1989; Kosmin 2013).

Notwithstanding the exact satrapy that Muṣaṣir fell under, archaeological and circumstantial evidence suggests the worship of Ḫaldi continued in the area. The latest historical reference to Ḫaldi comes during this period, centuries after Sargon II's sack of the temple. In the autobiographical Behistun Inscription of the Achaemenid king Darius I (522-486 BCE), the ruler describes a revolution in Babylon by an Armenian named Arkha, the so-called Nebuchadnezzar IV, and calls him the "Son of Ḫaldita" (Oppenheim 1985, 561). The Old Persian version of the text states Arkha was Armenian while the Babylonian calls him an Urartian, likely indicating the geographic homeland of the Babylonian usurper rather than suggesting the Urartian kingdom's continued existence (Beaulieu 2014, 18). Regardless, Arkha's origin in the heartland of Urartu and Ḫaldi and his father's name suggests some degree of continued reverence to the god through the 5th century BCE. While the continuation of the name Ḫaldi does not confirm a religious cult to the god or a temple at Muṣaṣir, archaeological evidence from the Sidekan subdistrict shows an occupation of the area by an Achaemenid populace with elite goods (Chapter 4 & 5). Thus, the population of Muṣaṣir was undoubtedly aware of Ḫaldi, suggesting a temple to the god remained through at least this period. However, following the fall of the Achaemenid Empire, the historical record makes no further reference to Ḫaldi, and the archaeological record falls silent for centuries.

At the end of the Achaemenid Period, the surrounding region takes on a new name, Media Atropatene. During the Macedonian invasion, an Achaemenid satrap named Atropates commanded Media for the Persians under the final Persian king, Darius III. With the arrival of the Macedonian armies, Atropates switched his allegiance to Alexander (356-323 BCE). Texts record Atropates' newfound loyalty to Alexander, resulting in his reinstatement as the satrap of Media under Macedonian rule and his eventual marriage to Alexander's daughter (Arrian. 1860, 7.4.5). Upon the death of Alexander, the Macedonian generals divided up the empire, leaving the foreigner Atropates with the small subdivision "Little Media," the minor northwestern part of Media around Lake Urmia (Chaumont 1987). Unwilling to be a vassal of a Macedonian general, Atropates established an independent kingdom thereafter known as Media Atropatene (Schippmann 1987, 222). In Schwarz's (1969, 61) study of Media Atropatene, he postulates that the kingdom extended from the shore of the Caspian Sea to the Zagros Mountains, abutting the Sidekan area. While contemporary scholarly works detailing the geographic limits of empires and kingdoms often divide territories using the peaks of the Zagros Mountains, Iron Age Muṣaṣir's eastward-facing allegiances provide evidence that the political boundaries may not have always aligned with the region's topography. Thus, Media Atropatene's sphere of influence around Lake Urmia may have extended into the high valleys of the Zagros Mountains in Sidekan.

Despite its modest size, Media Atropatene maintained its independence from the far larger Seleucid Empire (312-64 BCE) (Kosmin 2013; Strootman 2015). However, after nearly a century of autonomous rule, in 220 BCE, the Atropatene ruler Artabazanes

pledged allegiance to the contemporary Seleucid king Antiochus III, seemingly forced into servitude following his support of a revolt by Molon, the satrap of Media, against the Seleucids. Antiochus III marched against Artabazanes, bringing the latter's kingdom under the control of the Seleucid Empire as a proxy kingdom (Strootman 2015; Champion, n.d., 5.55.1-2). Even after Media Atropatene's integration into the Seleucid Empire, the Atropatene royalty continued to administer the region.

Not long after Atropatene's integration into the Seleucid Empire, the Parthian king Mithridates I took advantage of Seleucid weakness following defeats by Roman forces and conquered the Median satrapies. By 148 BCE, the Median territories fell under the administration of the Upper Satrapies of the Parthian Empire (Schippmann 1987, 223, 24). However, despite Parthian rule, Atropatene's rulers maintained some degree of autonomy. To maintain a good relationship with its northern population, Parthian royalty engaged in marriage pacts with the elites of Atropatene, seemingly electing to use influence rather than force to maintain control of these lands (Minorsky 1964, 188). More than a century later, in 36 BCE, Atropatene's autonomy ended with a failed alliance between the Roman general Marc Antony against the Parthians (Schippmann 1971, 309; Ziegler 1964, 36). Following the war against Marc Antony, the Parthians severely curtailed Atropatenean independence, eliminating the control by the royal dynasty in 10 CE (Kahrstedt 1950, 18; Ziegler 1964, 60). After the Sasanian conquest of Parthia in 226 CE, Atropatene's name changes again to Aturpatakan, the origin of the modern name Azerbaijan.

While royal records do not identify the region of modern Sidekan during the Achaemenid, Seleucid, and Parthian periods, ecclesiastical sources from the Nestorian church provide clues. Many Nestorian communities date back to the 5th century CE and have retained their names, helping locate historic locations using modern names as anchor points. For example, the Iraqi province of Erbil largely corresponds to the ecclesiastical province of Adiabene. A significant diocese in that province was Hanitha (a.k.a Hnita and Hebton), located "in the valley of the Great Zab between 'Aqra and Rowanduz" (Wilmshurst 2000, 166). This description establishes Hanitha in the area around modern Khalifan or Harir, located across the Rowanduz Gorge from the modern Diana and Sidekan subdistricts. Further, the neighboring diocese is Salah, "located to the east of Rowanduz," which, given that the Urmi province contained Lake Urmia, must lie around the area of Choman (Wilmshurst 2000, 166, 275–76). While available records do not indicate which Nestorian diocese Rowanduz and Sidekan fell under, Nestorians undoubtedly occupied these areas, with Nestorian communities documented in Diana and Sidekan until at least the 19th century CE (Ainsworth 1841, 69; Boehmer and Fenner 1973, 519–20; Wilmshurst 2000, 174).

Despite the known Nestorian occupation, the name of Sidekan during this time remains unknown. However, a 4th century CE Syriac text provides a clue about the name of the area north of Sidekan. In the text, *The History of the Heroic Deeds of Mar Qardagh*, the protagonist, Qardagh, travels from the lowlands of Adiabene to see a "certain blessed man" named Abdišo "in a mountain cave of Beth Bgash" (Walker 2006). According to Nestorian toponyms, Beth Bgash is in "the high and majestic mountains"

and should be “between the upper reaches of the Great Zab River and Lake Urmi[a]” and thus part of the diocese of Shemsdin (Walker 2006). The Nestorian Shemsdin district, modern Şemdinli, is located near the modern border between Turkey and the northern edge of the Sidekan district (Wilmshurst 2000, 279–83). Thus, Beth Bgash is located somewhere in this mountainous area currently controlled by the PKK, likely north of the Rukuchuk Gorge. While possibly in the far limits of the large Sidekan subdistrict, Beth Bgash was unlikely near the main habitation center around modern Sidekan town. However, the sacred connection of caves in this region is a relevant detail for understanding the emergence Ḫaldi cult.

With imperial or Nestorian sources failing to identify the area, western Classical accounts may provide possible toponyms. During Henry Rawlinson’s travels over the Kelishin pass, he postulated on the classical names for these territories. One possible identification he ascribed to Kelishin was the road “described to Xenophon when he was at the foot of the Carduchian mountains” (Rawlinson 1840, 23). Xenophon’s account describes the Carducian mountains as a place to go on the journey to Armenia, coming from the lower Tigris (Xenophon. 2008, 4.1). In the Carduchian Mountains are the headwaters of the Tigris, which is traditionally considered Anatolia, but the source of the Upper Zab in the Zagros Mountains may also be considered the headwaters of the Tigris River (Dandamayev 1990). Around Carduchia, Rawlinson describes the country of Anisenes (Rawlinson 1840, 18). The Anisenes Rawlinson notes here may relate to another entity called Azoni. Pliny the Elder, in his Natural History, writes of an entity called Azoni, in which the “Zerbis” (Great Zab) flows. Adjoining Azoni is “the mountain

tribe of the Silices and the Orontes, west of whom is the town of Gaugamela" (Pliny 1855, VI.181). Given that Gaugamela was somewhere between Dohuk and Irbil, and the Orontes here refers to the Upper Zab, the west of the town would be the foothills and mountains of the Zagros Mountains, corresponding to the general area of Sidekan (Lane Fox 1986, 228–43).

More concrete evidence favoring placing Aniseni/Anzoni around Rowanduz and Sidekan comes from a 591 CE report of a Byzantine campaign into Iran. Emperor Maurice sent Roman soldiers to assist the exiled Sasanian king Xurso II in defeating the usurper Bahram Chobin (Daryaee 2008, 80–83). In the Byzantine account, the detachment of Greek Byzantine soldiers works its way from the Mesopotamian plains into the mountains. They first occupy Irbil and then move to Hanitha, located near the modern towns of Khalifan or Harir. Bahram Chobin captures a bridge on the Upper Zab River to prevent these forces from joining up with Armenian troops marching from the north. With their original plan to combine forces on the western side of the Zagros Mountains ruined, the Byzantine army invades Aniseni to reach the eastern bank of the Upper Zab (Mionrsky 1944, 244–45). They then move to a village named "Siraganon." Armenian forces eventually met up with Byzantine general Narses, coming from Armenia, and Xurso II's army on the eastern side of the Zagros Mountains. Thus, following the itinerary, Aniseni was somewhere between the upper reaches of the Upper Zab River and the Lake Urmia basin, placing it in the general area of Rowanduz and Sidekan. The army must have moved through this area to reach the Urmia basin, avoiding the Upper Zab's widest and least crossable portions. Rawlinson identified Siraganon with

the modern village of Qal'a Singan, just to the east of the Kelishin Pass in the Urmia Basin, which would place Aniseni west of the Kelishin Pass. Further evidence for locating Aniseni near Sidekan is the name of a local tribe in that area mentioned by 19th-century travelers, Pireseni (a.k.a "Piresui," "Pirastini") (Rawlinson 1840, 25; Sykes 1908, 458). The names' similarity may indicate a continuation throughout time.

Moving forward almost a millennium, the Muslim Il-khanate (~1250-1350 CE) ruled over most of modern Iran and Iraq, with a known presence at Hasanlu Tepe, not far from the Kelishin Pass (Danti 2004; Amitai 2007). Given the power and proximity of the Il-khanates, its rulers likely exerted influence or control over the inhabitants of the Sidekan subdistrict. Not long after the disintegration of the Il-khanate, in the late 14th century, an Arab Muslim traveler and geographer named al-Qalqashandi passed through the area around modern Sidekan. He described three stone stelae made from "greenish stone," which almost certainly refer to the Topzawa, Kelishin, and Merg-e-Karvan inscriptions. The "Zarazarian" tribe then guarded at least one of the stelae, right below the "Janjarain" mountain (al-Qalqashandi 1973, 376; Marf 2014, 13). Accounts in the 19th century connect the Zerza Kurds to the Zarazarian tribe, residing on the border between Iraq and Iran, with a large contingent in the Ushnu valley (Ainsworth 1841, 63; Baillie and Bentley 1856, 89; Sykes 1908, 461). The tribe's name is perhaps connected to Muṣaṣir and the Urartians. In the Movana Stele, Rusa declares he made a sacrifice of sheep in the city of "Zarzar[u]," a name that bears striking similarity to al-Qalqashandi's "Zarazarian" tribe and would correspond to roughly similar areas (André-Salvini and Salvini 2002, 21; Roaf 2007).

Not long after al-Qalqashandi's travels, a Persian author writes a detailed history of the region that establishes the name of the surrounding region going forward in time. The text is a 16th century CE account called the Sharafnama, detailing the founding of Kurdistan, with a chapter devoted to the Soran tribe. This account is the oldest text that firmly establishes the identity of this area as Soran and Rowanduz. The author of the Sharafnama, Prince Sharaf al-Din Bitlisi, was a Rozhiki prince taking refuge in the Safavid court after the ousting of his dynasty by the Ottomans (Bidlīsī and Izady 2005, xvii). While the author takes some poetic license, the known sections follow external historical events and thus provide a useful source for determining early Kurdish history. Book Three, Part Two, and Chapter One details the history of the Sorani Emirate. While the tale is primarily helpful for establishing geographical names, the overall story of the dynasty also assists in understanding the character of the area's peoples.

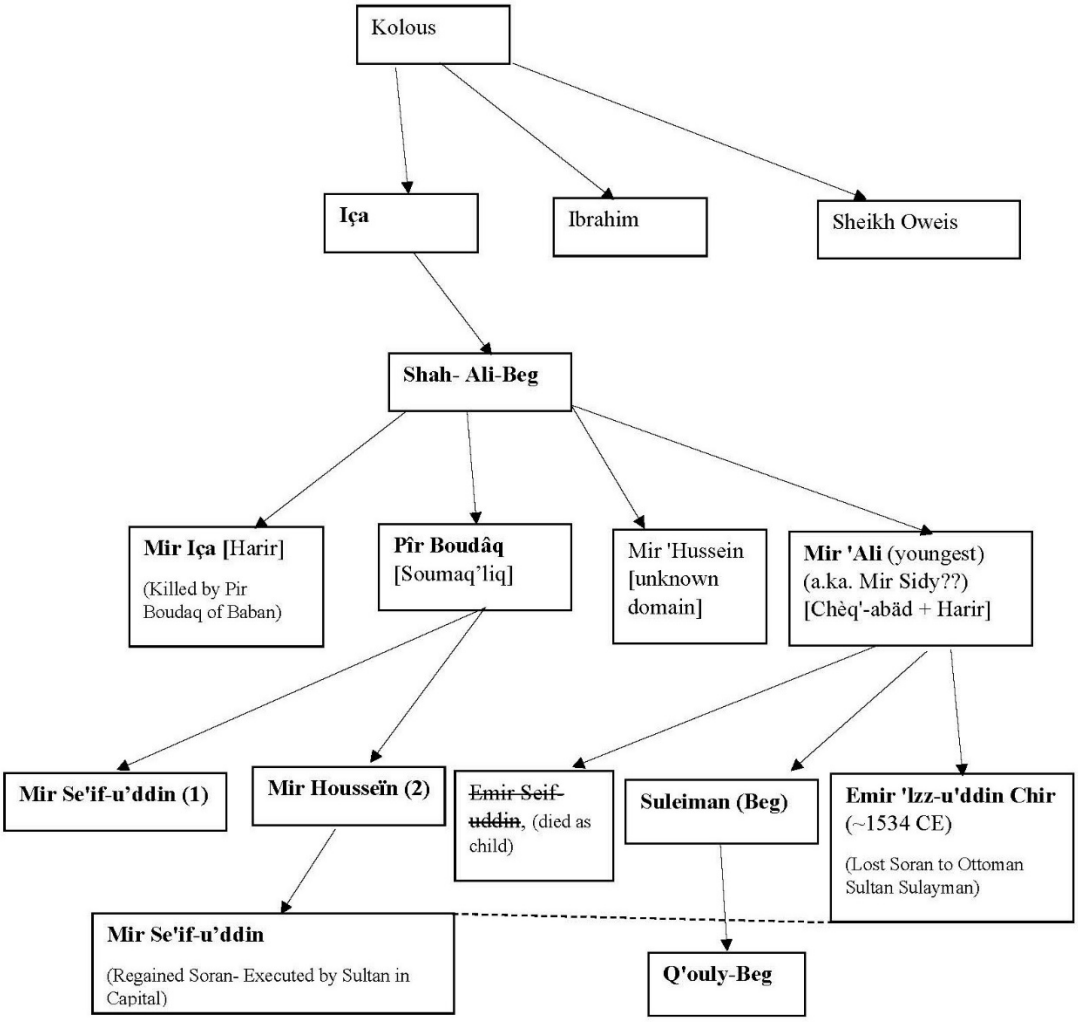


Figure 2.3: Geneology of the Sorani Rulers, adapted from the Sharafnama

The first ruler of Soran was a man named Kolous, an Arab from Baghdad who emigrated to Houdian (Hawdian) village. His eldest son, Iça, raised an army and captured the canton of Awan (Rowanduz). In the tale, his soldiers scaled the "red rocks" that surround the fortress. This apocryphal story establishes the etymology of the Soran clan – the name refers to their ability to climb the red rocks. After capturing the castle, Iça consolidates the area and names it Soran. His son, Shah Ali-Beg, took the throne and split

the domain between his four sons. The eldest son, Mir Içа, ruled from Harir but was soon killed by a rival king from the western Baban tribe named Pir Boudaq. One of Mir Içа's brothers, also named Pir Boudaq, ruled from the town of Soumaq'liq, and another, Mir Ali, from Cheq'-Abad. After Mir Içа's death and the Baban tribe captured his territory, Mir Ali fought and killed his brother Pir Boudaq, enlarging his realm to include all of Irbil, Mosul, Kirkuk, and Q'izilbaches. His son 'lzz-u'ddin Chir took on this sizeable kingdom after his father's death. In 1534 CE, the Ottoman Sultan Suleiman I (1520-1566 CE) conquered Baghdad and took control of Irbil, granting authority to a rival Kurdish prince, Hussein-Beg Daciny. Soon after, the Ottoman sultan executed 'lzz-u'ddin Chir, adding Soran's territories to Hussein-Beg Daciny's realm.

After 'lzz-u'ddin Chir's death, the great-grandson of Shah Ali-Beg, Mir Se'if-u'ddin, ruling from Soumaq'liq, fought numerous battles with Hussein-Beg Daciny, before attempting to take refuge in Iran. He returned to his family's domain and defeated Hussein-Beg Daciny after a series of conflicts. Sultan Suleiman executed the defeated Hussein-Beg Daciny and raised an army of Kurdish emirs loyal to him to attack the Sorani ruler Mir Se'if-u'ddin. The attacks failed and Mir Se'if-u'ddin enjoyed control over his dominion for a few decades. Eventually, he traveled to the Ottoman court to ask for forgiveness and a permanent role as guardian of this kingdom, but the sultan executed him on arrival in the capital. A new leader arose to lead the Soran clan named Q'ouly-Beg, 'lzz-u'ddin Chir's nephew. During the turmoil of the Ottoman invasions and executions, Q'uoly-Beg hid at the royal Safavid court in Iran, away from the Daciny tribe's rule of Irbil and Soran. After the Daciny's downfall, Q'ouly-Beg asked the Sultan

to restore his hereditary land of Soran. Instead of granting his request, the Sultan gave him control of a distant area, the canton of Semawat, near Basra. Once Sultan Suleiman executed mir Se'if-u'ddin, the Ottoman leader rewarded Q'ouly-Beg for his loyalty by reassigning Q'ouly-Beg to rule his family's ancestral home of Harir. Q'ouly-Beg reigned from Harir for twenty years. After his death, his two sons fought over Harir and control of Soran, with his younger son, Suleiman-Beg, eventually seizing control over the whole area.

With complete control of Soran, Suleiman-Beg led a campaign against "the great tribe of Zerza" with an alleged 13,000 Kurdish infantry and cavalry (Charmoy and Bidlīsī 1868, 134; Bidlīsī and Izady 2005). This Zerza tribe is almost certainly the same tribe al-Qalqashandi spoke of in his accounts a few centuries before, now known as Zerza. Importantly, this suggests the Sidekan area maintained autonomy even from its direct neighbors in Soran and the continued presence of a sizable population in the 16th century CE. Suleiman-Beg defeated the tribe, sending the surviving members to the court of the current Ottoman Sultan, Murad III (1574-1595 CE), to plead their grievances against the Kurdish ruler and request assistance. The tale describes a fortuitous occurrence of Suleiman-Beg capturing many Persians and sending them to Istanbul, earning him the goodwill of the Sultan and a pardon. Expanding his power, Suleiman-Beg attacked a cousin, Q'odbad-Beg, in 1586 CE, killing his cousin, fourteen family members, and seizing the territory of Terek (Charmoy and Bidlīsī 1868, 127–35). Regarding Terek's identity, Rawlinson notes a tribe, "which borders upon Sidek [Sidekan] northward" called "Terkur," possibly referring to the same entity that Suleiman-Beg attacked (Rawlinson

1840, 26). From that point, Suleiman-Beg reigned with absolute power and neighboring rulers were forced to obey him. The author of the Sharafnama, Bitlisi, was a contemporary of Suleiman Beg, ending the story in the late 16th century CE.

A few synchronisms allow a rough reconstruction of early Sorani chronology. The author gives two exact dates, 1586 CE, during the rule of the last Suleiman-Beg, and 1534 CE, with the Ottoman capture of Baghdad during 'lzz-u'ddin Chir's reign. 'lzz-u'ddin Chir was the great-great-grandson of the dynasty's founder, Kolous. The given information does not provide enough data to allow us to calculate the exact reign of each generation but using the tales of their reigns enables a rough estimate. Mir Ali established a strong domain, his father Shah Ali-Beg reigned over a large area but did not necessarily expand it, and his father, Içа captured Awan and built the dynasty into an emirate. As a comparison, roughly 50 years passed between the end 'lzz-u'ddin Chir's reign and a significant battle during Suleiman-Beg's reign, a period of three generations. However, those generations' longevity was shortened by the Ottoman sultan's executions of the Sorani rulers. Using the metric, assuming 25 years between 'lzz-u'ddin Chir and Içа is a reasonable estimate. Thus, Içа's rule would have begun sometime around 1450 CE, with his father's original journey to Hawdian at the beginning of that century, not long after al-Qalqashandi passed through the area.

Ottoman Empire & Sorani Emirate

After integration into the Ottoman Empire in 1586 CE, the Sorani Emirate seemingly disappears from the textual record for several centuries, existing as a component of the vast empire, at least in records currently available. A deep-dive into the imperial Ottoman archives in Istanbul might find further information about the administration of Soran, but they remain inaccessible to me and are outside the scope of this dissertation. In the 19th century, however, a strong ruler rose from the Sorani Emirate named Muhammad Kor. The expanding interests of the great powers of Europe in the Middle East and the accounts of travelers in the area provide information on him. In 1813, the Sorani emir Muhammad 'Kor' (a.k.a Kor Pasha, the "Blind Pasha") came to power in Rowanduz and began consolidating authority in the surrounding areas (Rawlinson 1840, 25).

Before the rise of Muhammad Kor, Sidekan had been a domain of the prince of Amadiya, located in the northwest. As the Sorani emir rose to power, he consolidated power in Soran and gained control of its immediate neighbors (Rawlinson 1840, 25). By eliminating any rivals in his emirate, he quickly gained complete command and the allegiance of the surrounding Kurdish emirates (McDowall 2004). While technically under the control of the Ottoman sultans for centuries, the empire left the individual rulers, *derebeys* (i.e. "valley lords), in control of their fiefdoms (McDowall 2004). This autonomy made the conquest of individual emirates by other Ottoman emirs possible without directly invoking the sultan's wrath in Istanbul. Muhammad Kor amassed influence and created alliances with the tribes of Baradost, Surchi, Mamash, and Shirwan

before conquering and taking control of the neighboring Kurdish emirates. In the 1820s he expanded his power by conquering the Ottoman valis of Hakkari, Baban, and Bahdinan, located in the area of Amadiya (Eppel 2008, 250). Because of Muhammad Kor's power and firm control over the population, the Ottoman governor in Baghdad bestowed upon him the title of *Pasha,* but he continued to expand his domain (McDowall 2004).

Expanding northward up the Tigris River, Muhammad Kor attacked the Buhtan Emirate before withdrawing and consolidating his gains (Eppel 2008, 250). At this point, his emirate stretched hundreds of kilometers across the Zagros Mountains and the piedmont regions, from Rania in the east, to Jebel Sinjar in the northwest, Hakkari in the north, and Erbil in the southwest. During the decade at the pinnacle of his power, he became the de facto ruler of this region. With this newfound power, Muhammad Kor employed Persian and Turkish experts to construct factories around Rowanduz, producing artillery, shells, rifles, and other weapons in addition to minting coins bearing his name (Eppel 2008, 250). Nearly a century later, Hamilton, surveying the landscape, saw the remains of the lower Rowanduz town, the location of Muhammad Kor's weapons factories (Hamilton 2004, 85). The total strength of his army allegedly numbered 10,000 cavalry and 20,000 infantry, providing him with a considerable measure of security (Djali 1973). However, despite his consolidation of power, Muhammad Kor remained a vassal of the Ottoman Empire, and the increasingly power-hungry Kurd began to pose a threat to the central government.

When Ottoman Sultan Mahmoud II (1808-1839 CE) ascended to the throne, he attempted to eliminate the semi-autonomous rulers inside the Ottoman Empire and bring them under stronger central control (McDowall 2004). As a far-flung and challenging part of the empire to access, Kurdistan and the inhabitants in the Zagros Mountains evaded the initial move towards centralization (McDowall 2004). Muhammad Kor's autonomous state in the Zagros Mountain and desire for further power eventually made him a target of the Ottoman sultan. Concurrent with the rise of the Sorani Emirate, Egypt, under Muhammad Ali, exerted considerable pressure against the empire, including an attempted overthrow of the sultan. In 1832 Muhammad Ali and his Egyptian forces captured the Levantine city of Acre and marched north into Anatolia itself, defeating the Sultan's army (Al-Sayyid Marsot 1984). With the Ottoman throne threatened by Muhammad Ali, the Sultan feared an alliance between Egypt and Soran, an existential threat that would effectively cut the empire in half. In response, Sultan Mahmud II launched an attack against the Sorani Emirate in 1834 (Eppel 2008, 251).

The sultan's Grand Vizier, Muhammad Rashid Pasha, marched against Muhammad Kor with a large force of troops from Anatolia, Mosul, and Baghdad, while a British emissary simultaneously attempted to broker peace. Like millennia before, the Rowanduz Gorge presented a formidable and dangerous barrier that would ensure significant casualties on both sides. A British officer involved in the situation, Robert Wood, believed Muhammad Rashid Pasha was rash, and his reckless actions would unintentionally lead to the strengthening of the Qajar Dynasty in Persia, against the interests of the British (Cunningham 1966). He arranged with the governor of Baghdad,

Ali Ridha Pasha, to facilitate a meeting with Muhammad Kor, in which he could resolve the conflict peacefully. Upon arriving in Rowanduz, Wood found a Persian agent persuading Muhammad Kor to escape to Iran and ally with the Persians against the Ottoman Empire. According to Wood, he informed Muhammad Kor that the Persians were simultaneously allying with the Ottomans to quash the nascent Kurdish state, and the arrival of Muhammad Rashid's forces was imminent. Wood's argument of an impending Persian and Ottoman alliance is somewhat doubtful and may have been a strategic tactic, lie, or embellishment on the part of the British officer. Regardless, negotiating between the competing interests of Muhammad Kor, the Ottoman sultan, and Qajar Persia, Wood arranged for Muhammad Kor to travel to Constantinople, pledge allegiance, and return as a buffer against Iran.

Trapped between two much stronger entities, Muhammad Kor acquiesced and agreed to travel to Constantinople (Cunningham 1966: 104-106). The Ottoman authorities likely never intended to follow through with this plan, given their new practice of eliminating hereditary rule in the provinces. The journey to the Ottoman capital progressed without notable incident, but Muhammad Kor was killed on his return journey, likely by Ottoman factions not wishing to see the Kurdish ruler reinstalled (McDowall 2004; Eppel 2008). After that point, the Ottoman Empire absorbed Soran and Rowanduz into the empire's centralized system.

Despite full integration into the Ottoman Empire in the mid-19th century, the effect of either Ottoman or Persian rule throughout its history is minimal. Masters notes in his dissertation on Rowanduz that "the control of the Iranians and Turks was thus

largely confined to the maintenance of police posts and army installations and the attempt, often in vain, to maintain public order and collect a few taxes" (1954, 10). While the focus of this dissertation is on the Sidekan area, the historical references concerning Rowanduz are significantly more robust, and the city was the nearest major center to Sidekan for much of recent history. After Muhammad Kor's fall, Rowanduz continued as the region's center, controlling the district that would later become Soran. Prior to the formation of Iraq following World War I, the Ottoman forces maintained a small garrison of two battalions of infantry and a police detachment (Masters 1954, 13).

During this late period of the Ottoman Empire, Jewish subjects continued to live and thrive at Diana before migrating to Erbil and Mosul. Their eventual immigration to the west led to physical and oral records that recent scholars used to reconstruct their actions in the area during the 18th century and before. Specifically, a tribe of Jews, the Binjamin clan, lived in Diana, mentioned earlier as a long-lasting bastion of Nestorians (Zaken 2007, 203). According to a living local inhabitant, Diana roughly translates as "the Christian enclave," which confirms its history as a town for at least one religious minority and unsurprisingly home to other religious factions. In the 19th century, the head of the Binjamin clan, Moshe Binjamin, traveled up to "Sidaka" (a.k.a. Sidekan) to meet the tribal chief residing there, Mahmud Beg, the chief of the Pireseni tribe, mentioned above. The road from Diana to Sidekan was, even during this phase of relative peace under the Ottomans, still quite dangerous. On Moshe Binjamin's journey back to his home in Diana, he was ambushed by another tribe in Shaikhan, near the base of the modern Sidekan road (Zaken 2007, 168–69). In addition to providing details on the

names of the area during this time, the Jewish accounts create a narrative of the danger and difficulty of reaching the isolated area of Sidekan.

Modern: Iran/Iraq War

After World War I, the colonial powers divided up the Ottoman territories, combining the vilayats of Baghdad, Basra, and Mosul to create the modern state of Iraq. The Treaty of Lausanne, signed in 1926, split the Kurdish populations between Iraq, Syria, and Turkey. During the first few years of Iraqi independence, the country was under the administration of the British government, and also during this time, the Kurds revolted, attempting to gain their autonomy and independence (Aziz 2011, 60–62). As Hamilton describes in his memoir, the British suppressed the revolts with airpower and the assistance of Assyrian Christian levies (Hamilton 2004, 64). The British accounts described the bombings as civilized, despite the loss of life they caused, in a sign of the era's thinking. One purpose of Hamilton's road constructed through the Rowanduz Gorge was integrating these previously isolated pockets in the Zagros Mountains into the rest of the country. After the British passed control of the county to the newly formed national Iraqi government, the Kurds continued rebelling against the central authority, forcing the retreat of a large contingent of Kurdish soldiers into Iran (Aziz 2011, 67).

Roughly three decades after Iraq's independence, the country, then under the autocratic rule of Saddam Hussein, declared war on the newly formed Islamic Republic of Iran (Murray, n.d., 90–98). In addition to causing tens, if not hundreds, of thousands of deaths, the war and subsequent Anfal campaign against Kurdish rebels inexorably altered

the landscape. Despite its distance from the main theaters of conflict, at least one military campaign occurred in the area of Rowanduz and Sidekan.

After months of conflict and periodic skirmishes, mainly through airstrikes, between Iraq and Iran through early 1980, war broke out in late 1980. In September, Iraqi ground forces invaded Iran's southern province of Khuzestan, reaching the city of Ahvaz. Through the next year, Iraq advanced against Iran before Iran mobilized its forces (Murray, n.d., 110–50). Saddam Hussein, expecting a quick victory, was unprepared for Iran's leader, Ayatollah Khomeini, to use the attack to consolidate power and raise the banner of holy war (Murray, n.d., 90–98). By 1981, the Iranian forces began taking back territory, which started seven years of mostly inefficient fighting. At the end of the conflict, in 1988, the only lasting result was a changed political situation in both countries and the proliferation of weapons throughout the region (Murray, n.d., 336–43). The many battles fought between these two countries were split into several discrete campaigns, with clearly defined dates. Record of these operations, combined with anecdotal and ethnographic evidence from fieldwork in Sidekan, provides rough tracking of the military actions in Sidekan (Murray and Woods 2014, 344–47).

Although the Kelishin pass near Sidekan afforded the Iranians an accessible route for invasion, few campaign accounts record the Iranians attacking this position. The most significant evidence confirming Iranian attacks in this area is detritus from military operations and anecdotes from locals who lived through the battles. These tales of the war can be combined with general histories of the entire war's trajectory and various campaigns to determine the validity of anecdotal accounts. Older residents in Sidekan

and Mudjesir discussed how many of the hilltops in the area, notably Qalaat Mudjesir, were utilized as anti-aircraft positions or emplacements for high ordinance weaponry. On a field at Mudjesir, the Iraqi Army allegedly flattened most of the area to clear space for a large artillery gun. In one attack, the Iranians moved past Kelishin, into Sidekan, and headed towards Soran and Mosul. How the Iraqis stopped the Iranian advance is unclear, but there is no evidence for conflict on the Diana Plain. Physical scars on the landscape around Sidekan corroborate much of this narrative. Hilltops like Qalaat Mudjesir show the telltale sign of military trenches around the edges and holes dug into the site either for storage or weapon emplacements. Satellite imagery reveals many more hills in the area with similar military trenches around the sides. Mudjesir, where the alleged flattening occurred, is littered with metal detritus, including spent shells and metal scraps.

The vast minefields around Sidekan further confirm extensive warfare in the area. Among others, the hills around the Topzawa Valley contain multiple minefields, although most of the lower slopes of the hills are either cleared or did not initially contain minefields. A more extensive minefield exists along the Old Sidekan Road, following the Sidekan and Barusk Rivers. This explosive barricade would have blocked any sizeable Iranian advance through the area in the case of a largescale attack. Despite clear evidence of the conflict, the military actions in this area were part of the more notable campaigns of the war.

Several Iranian campaigns attacked Iraq through Kurdistan's eastern border, but most occurred near the Shahrizor Plain and Sulimaniyah, with a handful attempting to enter through the Gawra Shinke Pass (a.k.a. Piranshahar in Persian) near the town of

Hajji Omaran. In 1983, 1985, and 1988, three primary campaigns attacked Iraq through the Gawra Shinke Pass, attempting to capture Rowanduz. None of the records of these attacks explicitly record an offensive over the Kelishin Pass, but a simultaneous secondary attack during these more significant offensives is possible. The first campaign, dubbed Dawn 2, began July 2, 1983, intending to defeat the Iranian Kurdish PDKI group hiding in Iraq. Iraqi Kurdish KDP forces, under the leadership of Mustafa Barzani, were allied with Iran and intended to stop the PDKI's power in their homeland of Iraq. Iranian forces crossed the pass and penetrated 10 miles into Iraq before a series of fights stopped the advance at the town of Rayat, where they built trenches and other fortifications (Razoux and Elliott, n.d., 249). During this campaign, an Iranian general named Hassan Abshenasan was killed during a paratrooper operation at "Sarsul Kelishin," according to multiple accounts on Iranian websites, but otherwise unconfirmed (Agency n.d.; "زندگینامه: حسن آبشناسان (1319 - 1365)" n.d.). Sarsul Kelishin may refer to a place called Sarsul located near Choman or to a "Kuh-e Sarsul" located directly on the other side of the border from the Kelishin Pass (Google Maps). If it is the latter Sarsul, that would indicate an attack, possibly in vain, over the Kelishin Pass.

Two years after Dawn 2, on September 8th, 1985, after losing some territory to Iraq, the Iranian military launched Operation Jerusalem 5. Its forces continued past Rayat, capturing it and reaching 20 miles east of Rowanduz. Strong Iraqi opposition there halted the Iranian advance and stabilized the front before the Iranians pulled back to their original position 12 miles inside Iraq (Razoux and Elliott, n.d., 330–31). Two years after Jerusalem 5, Iran launched an all-out assault, dubbed Kerbala 7, attacking northern

Kurdistan, threatening Iraqi oil exports, and diverting Iraqi forces north. Although the Iranian forces were mostly successful in their short term objective of capturing the Gerdmand Heights and reaching within 10 miles of Rowanduz, they failed in either capturing the city or threatening Iraq's oil fields (Cordesman 1994, 37–38; Razoux 2015, 397–98). For the Jerusalem 5 and Kerbala 7 attacks, no definite evidence exists of attacks over Kelishin, but given the full-scale offensive, they would likely have made use of this pass in at least one of these three campaigns. One alternative theory is that Iranian forces skirmished with Iraqi forces on the other side of the Kelishin Pass. Regardless, Iranian forces advanced into Iraqi Kurdistan at some point during the war, contributing to the destruction and alteration of the landscape.

After the Iran-Iraq War ended, Saddam Hussein carried out the systematic suppression of the Kurdish population, justifying the genocide as punishment for their role in supporting the invading Iranians. This operation was dubbed the "Anfal" and killed an estimated 100,000 Kurds in Iraq (Aziz 2011, 78–79). Other than the horrible loss of life, this genocide resulted in the further alteration of the landscape. One impact on the landscape was the construction of the "high road" in the Rowanduz Gorge, leading from Gali Ali Beg up to the town of Rowanduz, supposedly to facilitate easier access by Saddam Hussein's tanks to squelch rebellions there. The road existed earlier in the twentieth century but as little more than a dirt path. Inadequate evidence exists on the precise date of the construction, but locals stated in conversations a construction date during the Anfal. Other military installments seemingly continued to be utilized by the Iraqi military or were reoccupied when rebellions arose. In addition to, modifications

were caused by Kurdish rebels themselves, using high ground and caves as headquarters for attacks against the Iraqi forces. In addition to military alterations of the landscape, Saddam Hussein's Ba'athist government also engaged in the process of "nationality correction," which specifically relocated many small Kurdish villages in the area into larger, easier to control cities, like Soran (Aziz 2011, 78–79). This relocation resulted in the decay of relatively modern structures into the landscape, now nearly unrecognizable from the far more ancient ruins. The sum result of the military occupations during the Iran-Iraq War and its aftermath is a drastically altered landscape from millennia ago, requiring thorough investigations.

Chapter 3 : Archaeological Background of Sidekan and Soran

Over the last century, archaeological research in the Soran district by outside researchers and investigators was limited to a handful of expeditions, constrained by the geopolitical situation and the area's isolation behind the imposing Rowanduz Gorge. Despite the small number of archaeological projects and the complete absence of large-scale stratigraphic multi-period excavations, local and foreign researchers established a foundation of knowledge regarding the archaeological and historical past of the district. Early travelers like Jacques de Morgan (de Morgan and Scheil 1893) and Ferdinand Friedrich Carl Lehmann-Haupt (1893, 1926) documented visible historical features during their journeys. Later, in the mid to late 20th century, archaeological teams led by Ralph Solecki (1973; 1979), Patty Jo Watson (Braidwood and Howe 1960; Braidwood et al. 1983), and Rainer Michael Boehmer (1973; Boehmer and Fenner 1973) briefly investigated Paleolithic, Neolithic, and Iron Age sites, respectively. Even when foreign research ceased, archaeologists from the Iraqi national government, like Fuad Safar (1950), and Kurdish archaeologists from Soran, including Dlsahd Marf (2014), continued investigating and documenting the material history of the region. The contributions by all three categories of people helped provide the groundwork for understanding the area's history.

In the 2010s, a loosening of restrictions led to a new wave of research projects that attempted to fill in gaps in the archaeological record at new sites and with new

methodologies. The first project to begin work in the Soran district was the Rowanduz Archaeological Project (RAP) in 2013. RAP's original and primary objective was to excavate the multi-period mound site of Gird-i Dasht, on the center of the Diana Plain, to establish the missing complete chronological sequence of the Soran district. In 2014, a team from the University of Halle, led by Claudia Beuger (Beuger et al. 2015; 2018), initiated a survey and excavation project covering the Khalifan subdistrict of Soran, located to the west of the Rowanduz Gorge. The following season, in 2015, a team from the University of Cambridge resumed excavations at Shanidar Cave, initially excavated by Solecki (Reynolds et al. 2016; Pomeroy et al. 2020). This trio of modern projects, with more surely to follow, are beginning to add more detail to the corpus of archaeological knowledge of the Soran district and the northern Zagros Mountains.

Previous Archaeology

The earliest archaeological records of the Soran district come not from archaeologists but early modern travelers. The accounts of these travelers through Soran and Sidekan told through letters, memoirs, and official reports supplement the archaeological record, serving as windows into the pre-industrialized landscape and documenting cultural traditions. Several of the travelers' accounts record interactions with archaeological remains. Despite the limited research by foreign scholars, the local antiquities department continued documentation and excavation throughout the decades of isolation during Saddam Hussein's reign, serving as an invaluable record to present studies.

The earliest foreign research involved travelers documenting archaeological remains as part of longer accounts of their journeys. The Kelishin Stele is a feature in many of the early travelers' accounts in the area (de Morgan and Scheil 1893; Lehmann-Haupt 1893; Lehmann-Haupt 1926). During Lehmann-Haupt's travels through the area in the late 19th century, he located the Topzawa Stele. Given its findspot, however, Lehmann-Haupt concluded that a small nearby hill, called Schenke, was the location of ancient Muṣaṣir (1917; Belck and Virchow 1899). These early archaeologists were joined in their discoveries by a handful of travelers, including missionaries traveling from Mosul to Urmia through Rowanduz, documenting the people and landscape of the Kurdish Mountains.

Archibald Hamilton, an engineer working on behalf of the British government, published an extensive account of his road construction project through the Zagros, most notably through the Rowanduz Gorge. His memoir provides information not only on the contemporary situation of the Kurds and the state of the landscape but details on a handful of ancient locations. From an archaeological perspective, he records the first moment he saw the mound of Gird-i Dasht where the Rowanduz Gorge debouches onto the Diana Plain (Hamilton 2004, 74–83). Late during his posting in the Kurdish mountains, he adventures into caves cut into the Baradost Mountain with the hope of finding a lost Assyrian treasure. Despite his adventurous account, neither he nor his local travel companions found any archaeological evidence (Hamilton 2004, 155–58).

The first surge of foreign archaeological excavations in the area occurred during the 1950s, with projects focusing on prehistoric periods. In 1951, Ralph Solecki

excavated Shanidar Cave, a sizeable Neanderthal site, with Proto-Neolithic and some Iron Age material. Located alongside a small pass in the Baradost Mountain, about 325 m above a small tributary of the Upper Zab River, the cave is approximately 25 x 40 m in size, with an opening about 8m high (Solecki 1979, 318). Some distance from the study's primary area of focus is the small river that is one of the only passages through the Baradost Mountain and further into the Zagros. Over ten seasons, the main excavation trench reached a depth of 14 m, with eight Neanderthal skeletons recovered in the lowest phase (Layer D). Excavators recovered flower pollen from the area around the Neanderthal burials in this phase, which Solecki postulated in his early work as signifying a high-level understanding of death and burial (Solecki 1971, 5–11). Further examinations of the archaeological material and excavations suggest rodents likely carried pollen into the excavation pit during the field seasons (Sommer 1999, 127–29). Despite this changed interpretation, the Shanidar Neanderthals remain famous across the archaeological literature, as this collection of Neanderthal burials remains significant.

Along with the Neanderthal burials, Solecki uncovered an extensive collection of Proto-Neolithic burials in Layer B, dating to the eleventh millennium BCE. The size of the cemetery and burial goods indicate Shanidar Cave's importance in the period. By the end of the 1960 field season, the excavators uncovered a total of thirty-five individuals, but the cessation of excavations after 1961 prevented a complete exploration of the extent of the cemetery. The burials are roughly contemporaneous with the Late Natufian phase in the Mediterranean, but the Zagros mountain version of this Proto-Neolithic phase is named Baradostian, eponymously after Shanidar's location in that mountain (Solecki

2004, 1–9). Of the thirty-five burials, half contained grave goods, such as personal ornaments and bone tools. Most burials were of children and infants, and several of the bodies were arranged in clustered graves, along with a few cases of later internments disturbing earlier burials (Solecki 2004, 27–28). Shanidar Cave was vital in establishing the characteristics of Proto-Neolithic occupation in the Zagros Mountains and neighboring areas. Solecki's ethnographic documentation of the nomads inhabiting the caves seasonally during the 1950s also shed light on nomadic practices not only in the modern period but throughout history (Solecki 1979). Recently, a team from Cambridge reopened excavations at Shanidar Cave (Pomeroy et al. 2020).

Before and alongside the excavations at Shanidar Cave, Ralph Solecki surveyed the caves in the Baradost Mountain to determine locations with the most archaeological potential. His ethnographic record of the movements of the locals at Shanidar Cave and the surrounding areas, in addition to their subsistence methods, provides a rare account of traditional subsistence practices in the area (Solecki 1998). Local Kurdish populations during Solecki's observations used the surveyed caves primarily in the winter. Surveys in 1951 and 1953 resulted in a rich database of cave sites. Fifteen sites are in the valleys around the Baradost Mountain, high above Shanidar Cave and far downstream (Solecki 1998). In addition, Solecki surveyed several caves in the Rowanduz area with assistance from locals, including the local mudir of Sidekan (Solecki 1952). One lay far to the north of Sidekan, on the border between Iraq and Turkey. This provides an interesting connection to the Nestorian tale of the cave of Beth Bgash. Solecki documented an additional 15 caves as part of his survey, mostly along the Rowanduz River. Artifacts at

the documented caves were limited and not useful in dating; Kospyspe Cave contained some sherds at its entrance, and the cave of Shakft Galala also had sherds near its entrance. Galala Cave, near Choman, contained a possible petroglyph but no associated artifacts (Solecki 1998, 27). Most caves inspected by Solecki had remains of contemporary Kurdish occupation, such as temporary shelters and burning on roofs from fires, along with a handful of sherds with unknown dates (Solecki 1998).

Concurrent with Solecki's survey of caves, Henry Field, along with Iraqi archaeologist Fuad Safar, recorded the Bestoon and Diyan (a.k.a Hawdian) caves. The pair of caves are on the Baradost Mountain, a twenty-minute walk from each other, high above the modern village of Hawdian on a small pass (Field 1951). Over ten days in 1950, the expedition from the Harvard-Peabody Museum excavated four soundings, two in each of the caves. The excavators expected to find Paleolithic occupation, like that in Shanidar, but they recovered no Paleolithic artifacts or burial, even at bedrock level. Overall, the pottery at the site dates to the Hassuna, Ubaid, and Uruk periods, with a collection of ceramics from Bestoon possibly dating to the Early Dynastic Period (Safar 1950). In general, the ceramic assemblages from both caves are similar. Given the brief excavation season, these results are primarily useful in establishing typical assemblages of pottery in this area. Fuad Safar published a representative collection of the pottery from these caves, used as comparanda for RAP's current survey and excavation (Safar 1950). The geology of the Bestoon and Hawdian caves, along with Solekci's cave survey, suggests numerous caves are in Mount Baradost, caused by the limestone formation that quickly erodes and causes large abscesses (Solecki 1998, 26). This propensity for erosion

explains not only the presence of the Rowanduz Gorge, with its substantial collection of caves, but the preponderance of cave sites around other sections of the mountain. The relative absence of caves in other sections of the district, away from the Baradost Mountain, is thus explained by the different geologic signatures.

Shortly after the beginning of the Shanidar Cave excavations, Patty Jo Watson, as a part of Robert Braidwood's Iraq-Jarmo Project, led a team in excavating the Halafian site of Gird-i Banahilk, located on the edges of the Diana Plain (Braidwood and Howe 1960, 33). The site of Gird-i Banahilk, excavated over ten days in 1954, measures 100m x 160m x 4m. During the British Mandate period, Assyrian levies, mentioned by Hamilton, used the mound and its neighboring hill for a gun emplacement and a landing strip. A documentary includes brief footage of the British RAF base located there during the Mandate Period (Case 1996). Watson and her team opened four main operations (A-D), along with two small ones that were almost immediately abandoned due to a lack of material (Braidwood et al. 1983, 545). In total, their team exposed 70 m^2, although they dug only about half of the excavation area to a significant depth (Braidwood and Howe 1960). Architecture at the site was minimal, with simple structures and poor preservation. Most of the occupation dates to the Halaf period, with a few traces of Middle Bronze Age, Early Iron Age, and Hellenistic occupation in the uppermost levels of the excavation. Extensive collections of Halaf style pottery connect Gird-i Banahilk with other sites sharing this ceramic tradition around Mesopotamia, like Arcpachiyah, Tell Halaf, and Chagar Bazar. Specifically, the Halaf assemblage relates to the "Eastern Halaf" type (Braidwood et al. 1983, 549). The Halafian pottery accompanied a collection

of pendants, seals, ground obsidian blades, and obsidian flakes, further evidence of the typical Halaf assemblage (Braidwood et al. 1983, 545–54). The radiocarbon dates for the main Halaf phase are in the range of 4900 to 3400 BCE (Braidwood et al. 1983, 579). As a whole, Halaf material largely conformed to the predicted assemblage, with the single deviation a lack of typical female figurines (Braidwood et al. 1983, 549).

The non-Halaf assemblage was limited to a total of 567 total sherds in three trenches, plus the small test trench (TT). Tentative dating assigned a selection of the ceramics to the second-millennium BCE, Iron Age, and early Hellenistic periods (Braidwood et al. 1983, 567). Much of the non-Halaf pottery came from Operation A, surrounding a stone wall. The operation overall only reached a depth of 1.25m, uncovering the top of the wall. Overall the pottery is mixed with Halaf and non-Halaf material, although the preponderance originates next to the wall (Braidwood et al. 1983, figs. 195, 204). The small assemblage of non-Halaf material, despite the lack of precise dating, helps further establish the ceramic characteristics of the region. Despite the short season, the excavation was important for establishing the nature of Chalcolithic settlement in the Zagros Mountains piedmont, the features of the local Halaf assemblage, and for researching a typical low-lying multi-period site.

After a lapse of more than two decades in archaeological research in the area, German archaeologist Michael Rainer Boehmer conducted a reconnaissance of the area in 1971. Led to this area in part by the known existence of the Kelishin and Topzawa Steles, the discovery of two human-shaped statues in 1951 provided a further incentive to investigate this area (al-Amin 1952, 224). In 1971, Boehmer identified and traced stone

walls along the Sidekan River that he identified as part of a city wall. Associated pottery dated to the early Iron Age, roughly the 8th-7th centuries BCE (Boehmer 1973, 35). Boehmer and his architect, Fenner, returned in 1973 for a brief week-long survey of the area. In addition to recording additional features at Mudjesir, the team located the sites of Old Sidekan, Schkenne, Tell Bain al-Nahrein, Tell Schasiman, and Huwela (Boehmer and Fenner 1973). Boehmer investigated the small mound of Schkenne in part because of Lehmann-Haupt's supposition that the site was the location of Muṣaṣir's Ḫaldi temple (Boehmer 1973, 31–32). Boehmer recovered a handful of diagnostic sherds, and while four of the five are in characteristic Urartian shapes, one glazed sherd dates nearly to nearly a millennia later, roughly the 9th-10th century CE (Boehmer and Fenner 1973, 481–86). Given the paucity of material and the seemingly preferential site of Mudjesir, Boehmer did not agree with Lehmann-Haupt's identification. The remainder of the sites were absent of any significant characteristics. Tell Bain al-Nahrein had merely a few fragments of a wall on the surface, Tell Schasiamn was a small mound with no archaeological remains, Old Sidekan contained the ruins of possibly a Nestorian village, and Huwela was a small dolmen without diagnostic pottery.

Boehmer and Fenner's survey of Mudjesir located further walls on the surface, large quantities of diagnostic Urartian pottery, and mapped the fortress site of Qalat Mudjesir. He traced the line of the stone masonry wall, exposed along the river, finding the possible existence of a doorway or gate in the southern wall (Boehmer and Fenner 1973, 489). Boehmer identified two possible building phases in these walls: an older phase constructed with large field stones and a newer phase built with slate stones in a

grid-like alternating pattern. The wall continued west for a few meters until it was no longer visible on the surface, and without a corner, Boehmer could not define the precise limits of his so-called "Lower Town." While Boehmer postulated a western, southwestern, and southeastern limit of the city wall, he was unable to locate any of the wall segments on the surface. Large quantities of pottery near the wall dated to the early Iron Age, 8th-7th century, corroborating Boehmer's earlier survey of Mudjesir (Boehmer and Fenner 1973, fig. 29). Two wall segments were cut by a road cut in the south of the area, perpendicular to the roadway's E/W direction. These two walls were founded on bedrock and each about 2 m wide (Boehmer and Fenner 1973, fig. 19).

To the south, slightly up a hill, between two elevated promontories, in an area Boehmer called the "Upper Town," were a number of wall remnants in the slope of the hillside, also perpendicular to the hill (Boehmer and Fenner 1973, 491). In addition, Boehmer and his architect Fenner drew up a detailed plan of the Qalat (Kale) Mudjesir site, located on a hill above the village of Mudjesir. The site is just under a hectare in area and overlooks the surrounding region from its high promontory. Walls on the surface laid out a plan of three tiers: a large fortification wall mirroring the topography of the peak, a smaller wall around the higher point of the hill, and a narrow, rectangular building with distinctive Urartian buttressing. Similar fortress plans in Urartu, along with the pottery below the site near the river, suggest an Urartian date for the fortress (Boehmer and Fenner 1973, 508–15).

Boehmer investigated the small mound of Schkenne in part because of Lehmann-Haupt's supposition that the site was the location of Muṣaṣir's Ḫaldi temple (Boehmer

and Fenner 1973, 489). His survey only recovered a handful of diagnostic sherds, and while four of the five are in characteristic Urartian shapes, one glazed sherd dates nearly to nearly a millennia later, roughly the 9th-10th century CE (Boehmer and Fenner 1973, 481–86). Given the paucity of material and the seemingly preferential site of Mudjesir, Boehmer did not agree with Lehmann-Haupt's identification. The modern village of Sidekan is the same settlement Boehmer visited during his travels, but the original, older Sidekan that Lehmann-Haupt visited and recorded as a Nestorian site is located some distance away, to the west of Mudjesir (Boehmer and Fenner 1973, 519–20). Boehmer's survey around the village of Sidekan, located east of Mudjesir on an open expanse next to the Sidekan River, yielded a large quantity of pottery. Although some later glazed Islamic wares were mixed in, the pottery mostly dated to the Iron Age, like that at Mudjesir.

Boehmer recorded two tell sites near Sidekan and an apparent tomb structure further west. Tell Bayin do Rubar and Tell Schasimann shared the typical topographic character of archaeological sites in the region, but Boehmer was only able to collect a handful of fairly undiagnostic sherds that neither confirm nor deny the site's antiquity. In addition, he recorded the dolmen site of Huwela in the hills south of Mudjesir. Relying on the early Iron Age dating of the pottery at Mudjesir, the large column bases littering Mudjesir's fields, the location of the Topzawa Stele on the pass down from Kelishin, and the linguistic similarity between the name Mudjesir and Muṣaṣir, Boehmer proposed Mudjesir as the location of ancient Muṣaṣir (Boehmer and Fenner 1973, 514; Boehmer 1978). Boehmer's survey and publication of archaeological material in the area formed a foundational pillar for the Sidekan area survey. More recent archaeological fieldwork by

Dlshad Zamua Marf collected material that continues to support that hypothesis (Marf 2014; 2015).

Modern Archaeology

From roughly 2012 through 2017, archaeological projects under the Kurdish Regional Government (KRG) expanded significantly, with dozens of European and North American teams starting new excavations and surveys. In 2012, the KRG administration began granting archaeological permits to foreign projects in large numbers for the first time. Archaeology in Iraq proper had languished for decades under Saddam Hussein's regime and the subsequent violence during the post-invasion insurgency following Operation Iraqi Freedom in 2003. Many of these permits were granted without the authority of the Iraqi central government, solely by the authority of the KRG. Because of a significantly improved security situation and a marginally more straightforward process to obtain permits, the KRG experienced a surge of archaeological prospection, with at least 45 international projects as of 2015 (Bonacossi et al. 2015). The research for this dissertation ceased after 2016, primarily due to complications in the security situation. Fortunately, four seasons of active archaeological research resulted in a drastic increase in the amount of excavated and surveyed material in the region.

Despite the lapse in foreign archaeological research for decades, local Kurdish authorities and archaeologists continued to record and excavate at-risk sites. After the First Gulf War, in 1992, Coalition forces secured the Kurds' relative autonomy in the north (O'Leary, McGarry, and Ṣāliḥ 2005, 24). Residents constructed new bureaucratic

entities with this newfound authority, including tourism and archaeological administrations. The KRG created the General-Directorate of Antiquities under the Ministry of Tourism, itself under the Ministry of Municipalities. In 2012, the central KRG administration created a new Directorate of Antiquities division, located in Soran, focusing on the archaeology in Soran, far from the capital in Erbil. Since then, the Directorate, under the auspices of Abdulwahab Suleiman, conducted many investigatory and rescue excavations in the face of Soran's rapid development. The Soran Antiquities Department excavated and surveyed at least 35 sites in the course of these investigations, with locations all around the Soran district and from periods ranging over thousands of years (Kaercher 2014).

In 2014, Kaercher, a RAP team member, analyzed the pottery in the possession of the Directorate and was able to determine dates for many of these sites. Unfortunately, many of these sites lack a clear geographic location (i.e., rely on relative landmarks to guide archaeological survey), or RAP did not have access to the more exact GPS locations. Despite this, Kaercher published the most accurate version of the locations in her article, providing a relative overview of the occupation periods observed through these sites. Interestingly, only 3 of the 35 sites date to the Bronze Age or earlier, while the vast majority are from the Iron Age (Assyrian – Parthian), with a spike in Islamic material. Both the original collection of pottery by the Antiquities Department and Kaercher's analysis of the material are invaluable in adding to the range of ceramic types in the region. The connection between sites' sherds and applicable excavated sites will be discussed in subsequent sections. This relative distribution mirrors the pottery collected

from survey, which corroborates this general distribution, given that much of the departmental pottery originated from excavated contexts.

While RAP was the first foreign archaeological project to begin work in the Soran Directorate of Antiquities, we were soon followed by two other projects. First, a team from the University of Cambridge resumed excavations at Shanidar Cave in 2015 (Pomeroy et al. 2020). Their goal is to provide context to the original excavation of the Neanderthal skeletons by Ralph Solecki with new excavations, methodologies, and technologies. Through excavations in 2015-2019, their team unexpectedly found part of a Neanderthal skeleton that relates to Solecki's Shanidar 5, leading to a new goal of providing a more exact *terminus ante quem* for Solecki's excavation, dating the material 55,000 to 45,000 years ago (Reynolds et al. 2016; Pomeroy et al. 2020). In addition, they discovered a new Neanderthal skeleton adjacent to the infamous Shanidar 4 "flower burial" of Solecki's excavations. This body seems to corroborate Solecki's interpretation of a deliberate burial (Pomeroy et al. 2020, 23). As of the writing of this dissertation, their team had solely excavated Neanderthal material and has not published any findings from the later phases.

Along with the excavations at Shanidar, a team from the University of Halle, led by Claudia Beuger, began survey and limited exploratory soundings in Khalifan as part of a survey project. Their concession is the Khalifan area, the westernmost part of the Soran Directorate's authority. The area stretches roughly to the Upper Zab River in the north, the Baradost mountains in the east, the southern extent of the Alana Su, and the border of the Harir District in the west (Beuger et al. 2015). From 2014 to 2017, the survey team,

led by Claudia Beuger, surveyed 85 sites as part of their project (Beuger et al. 2018). Many of the sites share similar characteristics as sites that RAP surveyed, particularly around the Diana Plain.

Khalifan, much like Soran, lacks any large mounds (apart from Gird-i Dasht). The most common sites are fortresses, often visible on satellite imagery, with exposed architectural features. These sites, in general, do not have significant quantities of sherds, and many are modified by fortifications from the occupation of Saddam Hussein (Beuger et al. 2018, 62). Locating fortress sites through satellite imagery, as groundthruthing by the Khalifan survey and RAP's resurvey of Boehmer's Qalaat Mudjesir demonstrated, is often made impossible by the modern modifications that provide false positives and can hide the less visible ancient traces. At a few of the fortress sites (Hsarok, Gor Qal'at, Gird Zikhy Swasnan, for example), the wall architecture consists of "cyclopean" stone walls that the team associates with Iron Age or specifically Urartian style construction (Beuger et al. 2015; 2018). The ceramic finds do not necessarily confirm this interpretation, as a handful may be Assyrian type, but most collected fortress sherds seem to be Islamic or Ottoman. The surveyors may over-index on the architectural style and construction as a dating technique in some instances. For example, Gor Qal'at's architecture and large stone blocks are compared to Iron Age II, despite the excavators stating the only recovered pottery dates to the Late Ottoman Period (Beuger et al. 2018, 65). While the site may have origins in the Iron Age, without sufficient ceramic indicators, one should be skeptical of such an interpretation.

The Khalifan area survey also located several cave sites, mostly around the Baradost Mountain. Interestingly, RAP did not locate any new cave sites, as the survey spent little time next to the Baradost, itself seemingly full of caves. A minimal resurvey of the Bestoon cave by their team identified an example of a typical Urartian red-burnished Palace Ware (Beuger et al. 2015, 151). The Khalifan survey also resurveyed two sites surveyed by Ralph Solecki (Shakft Garan and Shakft Au Zen) (Beuger et al. 2015, 139). In addition to the cave and fortress sites, the Khalifan survey also located sites along the river basins. At many of these sites were distinctive gravestones that date to the Ottoman period but also paralleled the human-shaped gravestone statues at Mudjesir (Boehmer and Fenner 1973, Pl. 11-14). At one of these lowland sites, Pir Wali, gravel removal had already created extensive damage to large parts of the site, so the German team laid down a few soundings to investigate the extent and chronology of the remainder of the site.

The team laid down three soundings, all in the southern extent of the site, and cleaned sections on the exposed parts of the site's edges. None of the soundings showed any significant burning, although profile D contained a "fire-hardened" pit or kiln (Beuger et al. 2018, 71). While none of these soundings showed a large fortification wall, profile D contained a relatively well-constructed wall built into a wall construction pit. Excavators reached alluvial soil at the base of the excavation and established two main phases visible in each of the soundings. The top material is a combination of Islamic and probable Assyrian ware, possibly disturbed from earlier levels. The bottom phase, containing the architecture, was full of diagnostic sherds of Middle and Neo Assyrian

types, suggesting this location was an Assyrian outpost, possibly in the province of Kirruri (Beuger et al. 2018, 73–80). A notable characteristic of the Iron Age pottery excavated at Pir Wali is the ware's distinctive orange color (Beuger et al. 2018, 76). While the team only flagged this as a somewhat unique peculiarity, RAP's excavations in Sidekan recovered many sherds with this distinct orange ware.

A related project in 2016, led by Tobias Helms and Tim Kerig, conducted more extensive excavations at one of the sites located as part of the Khalifan survey, Jafrakani Kon. The excavators began work at the site in part because of encroaching construction that posed a threat to the site as well as its imposing physical characteristics with its large size and terraced walls (Kerig and Helms 2018, 419–20). The site is above a small tributary that connects to the Khalan Su River, a river in the north of Khalifan that flows into the Upper Zab River. While the excavators knew from conversations with locals that the site had been used in the modern period, before abandonment in 1963 in the first Iraqi-Kurdish War, they intended to investigate lower levels to determine if earlier occupation existed, possibly in the Iron Age. With the limited 14 days of fieldwork at the site, the excavators only opened two operations, both of which defined the width and depth of retaining walls that are part of the terraces. Operation A, the more extensive area, consists of three phases, an original construction and occupation phase, a fire event that destroyed walls, and a top layer of wall collapse and with some modern squatter traces (Kerig and Helms 2018, 425–26). The bulk of the pottery is handmade and appears to be Late Islamic or Ottoman, similar to sherds Boehmer collected at Sidekan and Schkenne, in addition to two tobacco pipes (Boehmer and Fenner 1973, 483–84). Overall,

the site appears to be relatively recent, although with a single Late Sasanian lid on the surface.

After the Jafrakani Kon excavations, Helms and Kerig led a small project that lightly surveyed the area around the RAP site of Gird-i Dasht and excavated a cave site, Ashkawta Rash, in the cliffs along the Balkikyan River (Kerig et al. 2019). Their report examining Gird-i Dasht corresponds with RAP's excavated results, discussed below. Ashkawta Rash had been noted by the Soran Directorate of Antiquities, but no one had excavated the site before the team's work there. Their excavation laid down one test trench in the center of the cave. Its upper layers contained handmade pottery and a tobacco pipe comparable to the material at Jafrakani Kon. A lower level (units 1-4) contained handmade pottery, charred material, small pits, and carbon samples. The dating of this layer ranges from the 14th-17th century CE (610 ± 30 BP, 380 ± 30 BP) (Kerig et al. 2019, 237). The lowest series of units had more burning, loose clay, handmade pottery, quartz ceramics, and a carbon sample that returned a date between 780-400 BCE (2460 ± 30), the Iron Age (Kerig et al. 2019, 238). The cave seems to have been a location for transhumant populations to take refuge but did not serve as a major storage site, like the cave of Bokadera.

While the main focus of this dissertation is on excavations and surveys in the Sidekan subdistrict, RAP also conducted a survey and excavations in the Soran district. This material, while not directly contributing to the Sidekan area's research questions, is vital in presenting the overall archaeological and geographic situation, as well as connections between Muṣaṣir and its neighbors in the Late Bronze and Iron Ages. As

described in the geography section, while the Sidekan subdistrict forms a discrete geographic region, Soran also forms a distinct unit because of the mountainous barriers on all sides. Travel between Soran and Sidekan would have been difficult in antiquity but far easier than passing over the Baradost Mountain or through the Rowanduz Gorge. While today Soran exerts political pressure over the Sidekan area, that may not have been the case in antiquity. Given the two area's close connection, the overall RAP excavations and survey form vital links for reconstructing the chronology and characteristics of the region.

RAP Excavations & Survey

RAP excavated seven distinct sites over four seasons, three outside of the Sidekan area: Gird-i Dasht, Qalaat Lokhan, and Banahilk. Of these, Gird-i Dasht, a high mounded site in the center of the Diana Plain, is the most important for establishing the ceramic chronology in this region, given its sequence of stratified occupation. One of the original research goals of RAP was to fully excavate and uncover the ceramic sequence at Gird-i Dasht, as it is one of the only tall mounded sites for hundreds of square miles. In the west is Tell Haftun, on the Harir Plain, and to the east, Hasanlu is the most notable excavated mound, although nearby sites, Dinkha Tepe and Agrab Tepe, also help form the ceramic sequence in the region (Dyson 1959; 1960; 1965; Muscarella 1968; 1973) RAP excavated Gird-i Dasht in its inaugural season in 2013, as well as in 2014 and 2016. A full report on excavations at Gird-i Dasht is forthcoming. Topographically, Gird-i Dasht is a high oval mound approximately 180 m long northeast to southwest, and approximately 90m east to west, rising 20m above the surrounding countryside, with a low "apron" of occupation

forming a lower mound to the north, west, and south. This lower town is called by the locals Gird-e Meer, although it is not technically distinct from the higher mound (Marf 2016; Kerig et al. 2019). Its total area is less than two hectares. Currently, berms of 1-2m surround the upper edges of the mound, presumably created as emplacements during the military occupation that placed an anti-aircraft gun during the 1980s.

On the mound's eastern edge is a ramp cut into its side, running up to the mound's top. Locals told conflicting stories about the ramp's creation. One tale dates its construction to the 19th century, during Ottoman rule, as a path to reach an agricultural *bazaar* on Gird-i Dasht's flattened top. Others date it to the Iran-Iraq War (1980-1988), when the Iraqi Army set up an anti-aircraft emplacement on the site's summit and needed access for their vehicles. Analysis of CORONA spy satellite imagery from the late 1960s and early 1970s does not clearly show a ramp, although specific visual characteristics may indicate a less defined road. The dating of the ramp is thus uncertain, but like many tales, both dates have their foundation of factual elements. Excavations at the top of the mound indicate an Iraqi military encampment and evidence of some Ottoman structure. Brief excavations at the ramp's base (Operation 5) failed to uncover any primary archaeological occupation, indicating a relatively recent construction. Both stories may be simultaneously true, with a ramp built for Ottoman occupants, but expanded and widened in the 1980s to enable military vehicles' travel.

RAP's excavations consisted of five operations. Excavations at Operation 5, mentioned above, lasted only three days. Two operations, Operations 1 and 3, are on the mound's top, while Operations 2 and 4 are on the mound's side and lower apron,

respectively. Excavations occurred in Operations 1 and 2 during the 2013 and 2014 seasons, while the 2016 season exclusively excavated Operations 3 and 4. Difficulties with digging through the thick trash layers near the mound's edges with Operations 1 and 2 necessitated abandoning those sections for more accessible areas of the site. Operation 3's already leveled space in the center of the mound, and Operation 4, along the low sloping gradient at the base of the mound, provided more convenient surfaces. Overall, excavations revealed considerable later material at the top of the mound, including Iran-Iraq War, Ottoman, Late Islamic, Middle Islamic, and Early Islamic remains. Excavations at the mound's base were less conclusive, complicated by unclear stratigraphy caused by the wash from the top of the mound. A large quantity of the overall pottery excavated is similar to the non-Halaf pottery recovered in the original excavations at Gird-i Banahilk in 1952 (Previous Excavations).

First opened in 2013, Operation 1 is located at the edge of the mound, cutting through berms. The intended goal of the operation was a step trench along the sides of the mound, which would quickly reveal earlier occupation layers, but complications prevented that. One, the mound's steep slope, made accessing the steps difficult and dangerous, and two, the mound's exterior consisted of a series of retaining walls, apparently filled with earlier recycled material, precluding dating the walls with any accuracy. Instead, the operation expanded to 3 meters (north/south) by 4 meters (east/west), with the eastern side at the mound's edge. Operation 1's top phase dates to the Iran-Iraq war, with a broken concrete squatting pan toilet, traces of concrete

construction, and a large collection of razor blades, many in their original packaging, manufactured in the former country of Czechoslovakia.

Excavating through the modern remains revealed a crude pavement and poorly preserved footings of a room, with corresponding ceramics dating to the Middle or Late Islamic Periods (1000-1400 CE or 1400-1800 CE). At the trench's western side was an accumulation of stone, three courses high, laying against an outer facing, forming a likely retaining wall as part of a terrace over past remains. Excavating below the wall revealed a corresponding floor, approximately 1.6 m below the mound's surface. Charcoal from the surface dates from 985-1154 CE (two-sigma range), placing the occupation either within the Uqaylid (990-1096 CE) or the Seljk/early Zinjid Periods (1016-1153 CE). The outer retaining wall, set out in a herringbone pattern, did not continue into the southern balk and only continued approximately 2m to the north. Removing some of the stones revealed stones placed in a sloping fashion, apparently to support the upper retaining wall. Locating a lower course of the wall became dangerous with the mound's steep slope. Excavations to the south and west of the trench, conducted in 2014, uncovered a room roughly two square meters in size, with a small hearth in the middle. The room may have been used as part of a complex to watch over the approach to the mound. One object, a "Poppy head" pipe bowl found in the room's upper fill, compares to a similar one found at Khirbet Deir Situn, near Mosul, and said to date to the 18th century CE. Overall, this trench suggested extensive modifications to the outer edge of the mound, with occupations in the Iran-Iraq war and the Ottoman period and traces pointing to an earlier occupation.

To investigate these later phases without the difficulty of the altered stratigraphy caused by exterior mound modifications, we opened Operation 3, in 2016, at another section of the mound's top. Measuring 5 x 5 m, the excavations in Operation 3 reached almost 4 m below the mound's surface at points, with access made possible by a wheelbarrow ramp constructed in the northwestern corner. The earliest phase contains a curving stone wall with three courses exposed ca. 3.5 m below the surface and a small *tannur* abutting its inner face. A small amount of associated pottery suggests dates either in the late Early Islamic (800-1000 CE) or early Middle Islamic Periods. Above this phase was a floor constructed of pebbles with a wall built on top of it, located in the northwest corner. While the balk made uncovering the extent of the wall impossible in 2016, a layer of flat stone lay roughly at the height of the wall, possibly indicating an earlier pavement. Pottery associated with the wall and pebble floor indicates a Middle Islamic date.

The latest architectural remains consist of two buildings, Building 1 in the southwestern portion of the excavation and Building 2 in the southeast. Building 2's wall was preserved only one course high, providing little material for analysis. Building 1 was the northeastern corner of a room, with a wall 70 cm thick and 7-8 courses high. The interior space of Building 1 consisted of two phases of floors, with a small stone feature abutting the eastern wall, measuring roughly 60 cm x 60 cm. Stone walls formed a box, postulated as a grain bin. The later floor in the room's interior was made of a white gypsum surface. A well-constructed stone pavement abutted Building 1's northern exterior wall. The pavement sloped sharply downwards to the west and was cut away

about halfway through the trench. In the fill of the cut that removed the pavement was a filling of a homogenous light brown soil containing almost no pottery. Large pits from later occupation pocketed the pavement and other nearby features. The western portion of the trench contained a thick band of homogenous clay like that at the trench's eastern edge, laid upon a reddish-brown plaster layer and the white gypsum plaster described above. Associated pottery with this phase supports an Ottoman date. Much like Operation 1, the upper phase of the trench contained detritus from soldiers fighting in the Iran-Iraq War. The stratigraphy indicates a trash pit running east-west with wires running north to south through the excavation. Excavations revealed large quantities of trash, including a wrapper of a chicken imported from Brazil, dated to 1985, providing the upper phase an extremely secure dating.

Given the concentration of later Islamic material on the top of the mound, we deemed it necessary to excavate the site's sides to reveal the full span of occupation. Unfortunately, the middle of the occupation, between the lowest levels of Operation 3 and the highest levels of Operation 2, on the mound's slope, is still unknown. Operation 2 was opened in 2013 as a small 2x2 m test trench on the mound's northwest edge, positioned along the mound's contours, postulated as an early fortification wall. Limited excavation in 2013 revealed a hard, brick-like platform not far below the mound's surface. Further expanding the trench in 2014 uncovered a more complex relationship, with a foundation trench filled with rounded river pebbles to the east of the bricky platform. The brick platform is similar to the clay around Gird-i Dasht, as evidenced in Operation 4 to the south. Its consistency suggests an original foundation with a melted

wall on top, wholly disarticulated over millennia of rain and erosion. Painted and plain Khabur ware was plentiful on top of this platform, providing a post-date of the wall in the Middle Bronze Age (Oguchi 1997; Oguchi et al. 2006). Additional miscellaneous sherds in secondary context are of the "Painted Orange Ware" type, characteristic of the Early Bronze Age in the 3rd millennium BCE (Danti, Voigt, and Dyson 2004). The wall and platform may date to the Early Bronze Age or before, but excavations in that area did not reveal conclusive evidence.

As an attempt to understand the early phases at the site, the team laid down a fourth trench, Operation 4, in 2016, on the low "apron" of the mound to the south. Measuring 5x5 m, the trench reached sterile soil approximately 2m below the surface. The plow zone extends 40cm below the surface, under which are two main occupation phases. The earlier phase consisted of pits dug into the sterile soil, filled in mainly with ceramics from the Early and Middle Islamic Periods, notably with a nearly complete black on a white glazed bowl, comparable to an example at Nishapur (The Metropolitan Museum of Art 2018). The pit also included some earlier pottery, like the Painted Orange Ware in Operation 2. A layer of rocks sealed the pits. The second, later, occupation phase consisted mainly of a series of five *tannurs* and ashy deposits, post-dating the earlier pits. Ceramics from this phase consisted of the Early and Middle Islamic types, as well as Ottoman pottery and pipe stems, glass bracelets, and iron nails. Despite the original hypothesis that this portion of the lower mound contained part of a larger, lower town, the excavation suggests this area was outside of the city. Jorg Fassbinder and his team from Bayerisches Landesamt für Denkmalpflege, Munich, conducted geomagnetic

surveys on the mound's eastern apron over the modern road to the top of the site. Large quantities of metal made the geomagnetic survey difficult and added noise to the results. The conclusions of the geomagnetic survey in this area and other sections of the small nearby hillock were inconclusive, although they indicated possible structures and roads between the magnetic signatures. A large lower town is still possible, and while further excavations are needed to support that conclusion, the excavations in Operation 4 make the existence of substantial occupation unlikely.

Along with excavations at Gird-i Dasht, I surveyed the immediate surroundings of the mound, collecting pottery in order to add chronological range to the occupation and to determine if there was an off-site occupation. During 2013, I collected ~350 sherds from the direct environs of Gird-i Dasht. Combined with 73 sherds the Directorate collected, this collection of ceramics revealed a long period of occupation (Kaercher 2014). Some of the latest sherds date to the 13th-14th century CE, a buff fabric with a green glaze, the so-called Geruz Ware, aligning well with the date of the excavated material above (Danti 2004). Eight sherds are a lightly tempered white fabric, with two handles and one fragmentary spouted sherd. These are comparable to Sassanian Period wares and shapes (700-1000 CE). About thirty sherds dated to the Iron Age, and twelve handles with incised designs mirror the sherds the Directorate excavated at the nearby cave of Bokadera, providing evidence for Iron Age occupation at both sites. Twenty-two pieces have wavy and straight-lined combed impressions, comparable to the material at Khirbet Qasrij (Curtis 1989, pl. 42, No. 229). In addition, five sherds resemble a Gray Ware typical to Hasanlu, on the other side of the Zagros Mountains in northwestern Iran (Danti

2013, 187–205). Originating from an earlier period, we collected four sherds of the distinctive Khabur Ware. It is a buff ware, usually with reddish or reddish-brown paint in geometric designs, on a reddish ware background, highly diagnostic for the Middle Bronze Age (2000-1700 BCE) (Oguchi et al. 2006). Three chaff-faced buff ware sherds, dating to an earlier period, have incised lines with comparanda in EPAS, dating to the Early Bronze Age. These sherds help form the ceramic sequence in the area and connect to the full analysis of survey pottery (Chapter 5). The German survey team visited Gird-i Dasht in October 2018 and collected additional pottery during their survey. Their pottery largely corresponds with our original dating: Bronze Age, Iron Age, Sassanian, and Islamic Period pottery (Kerig et al. 2019, 236)

Regarding the distribution of pottery around the site, much of the collection had poor spatial control, but the sherds' general locations help add to the understanding of Gird-i Dasht's place on the landscape. Most of the pottery collected came directly from the sides of the mound or immediately adjacent to it. Topographically, Gird-i Dasht's steep sides quickly even out to a low-sloped apron visible only from certain angles and in mapping data. An early theory proposed that this lower apron was an old lower town around the central higher mound. As the excavations in Operation 4 revealed, the apron consists mainly of wash from the high mound and limited Islamic occupation. The unique characteristics of Khabur Ware aid in connecting the excavation and surveyed material. The Khabur Ware in Operation 2, mentioned above, connects stratigraphically to the modern surface of the apron wrapped around the mound. At least one of the Khabur Ware sherds was recovered from the opposite side of the mound, showing that the Bronze Age

occupation at least spanned the entirety of the mound. Pottery off the apron quickly tapered off to near nothing, but there is one nearby off-site feature of note. To the southwest of the mound is a small hillock with a spring flowing. Today, this is a central gathering point for local agriculturalists and animals alike. Limited conversations with some of the older visitors of the spring recounted a tale of an ancient tablet at the spring's outlet and of a long aqueduct that brought the water from miles away. While the spring did contain multiple stones constructed together, creating a square box, none of these had any markings that would imply an ancient tablet. Further, looking into the spring did not suggest it continued a far distance through an aqueduct, although that idea was raised by local informants. Despite this, surveying the small hillock above the spring located a large cluster of pottery, mostly dating to the later Islamic periods. This pottery bunch could imply the earlier existence of some structure. Apart from the spring, the area around Gird-i Dasht did not reveal any notable features.

Other excavations by RAP revealed the archaeological background of Soran during the Ottoman and Sorani Emirate periods. As part of excavations of an at-risk site, requested by the *qaimaqam* of Rowanduz, RAP excavated the small fort site of Qalaat Lokhan near Rowanduz. The beginning construction phases of a new museum on the site uncovered and damaged part of the building, leading to an archaeological assessment. Located to the north of Rowanduz, overlooking the small village of Kaw Lokhan, the fort is on a rocky spur guarding the ascent into Rowanduz from the intersection of the three nearby rivers. Today, the modern Rowanduz road winds up the hillside, with Qalaat Lokhan nestled between two sections of that road. Two recently reconstructed

watchtowers are to the east and west of the surrounding gorge. The Sorani Emirate castle of Eichqalaat/Qalaat Pasha Kor is to the north and clearly visible from Qalaat Lokhan. When visiting the area, Masters (1954, 13) described the fortresses and the surroundings: "a ruined fortress of this leader [Mir Mohammad] is to be seen a short distance north of the town, and his descendants, the House of Ismail Beg, still own much of its property." A viewshed analysis in ArcGIS showed clear sightlines to monitor the northern advances into Rowanduz, from the hills around Soran and the Rowanduz River, in addition to obvious and unobstructed views of Qalaat Pasha Kor.

The site of Qalaat Lokhan is primarily a single building, 0.1 hectare in area and about 2.5 m tall. Small linear features around the site may correspond to degraded mudbrick walls. The excavation produced a topographic plan and excavated three small soundings. Operations 1-2 were on an exposed masonry corner of the building in an attempt to understand the architecture, date the structure, and determine the building's function, in addition to assessing any damage. The operations exposed the southeast corner of the building, constructed with roughly dressed and locally obtained limestone. Excavations also revealed a small section of the interior, including less than a meter of the floor. Glazed ceramics and pipes in one phase indicate a date from the Safavid to the early Sorani Emirate/Ottoman Period (1501-1736). The latest occupation extends to the late Ottoman period, with an excavated coin dating to 1840 CE. Enough evidence arose in the excavations to confirm its function as a fort and guard post.

To test the extent and historical depth of the site, RAP placed Operation 3 on the lower section of the site, some distance away. This 2 x 2 m test trench recovered mainly

Late Islamic and Ottoman material in trash midden combined faunal remains in an ashy matrix. Bedrock is 55-75 cm below the surface, delimiting the chronological extent of the site. In addition, the lack of architectural features relatively close to the main building's standing walls indicates the limited horizontal extent of the site. Much of the diagnostic pottery from this rescue excavation is comparable to that at the excavation of Jafrakani Kon (Kerig and Helms 2018). While both sites have tobacco pipes, the quality of the pipe at Qalaat Lokhan, as well as the number of fine goods and its proximity to Muhammad Kor's capital, suggest more elite usage of this site. Jafrakani Kon is a far more elaborate site, with multiple terraces, while Qalaat Lokhan was clearly intended mainly as a defensive position (Kerig and Helms 2018, 429). The excavation at Qalaat Lokhan established its probable role as part of a complex system of control and monitoring of the area during the height of the Sorani Emirate.

A third excavation in Soran involved returning to Patty Jo Watson and the Jarmo Project's excavations at Gird-i Banahilk in 2014. The impetus for the return was salvage excavations precipitated by home construction at the hill's top. Abudulwahab Soleiman, Director of Soran Department of Antiquities, requested RAP's assistance in identifying the impact of recent construction and determining the extent of remaining archaeological deposits. Unfortunately, development in the past decades obscured the original topographic characteristics of the mound, forcing us to guess the exact positioning of the original trenches. A major arterial road encircles the northern portion of the hill, and construction, assisted by bulldozers and other heavy equipment, flattened the top of the

mound. Currently, only the mound's eastern slope remains, and the exact position of the overall mound is uncertain (Kaercher and Sharp 2018).

RAP placed a single 3 x 4 m sounding on the northeastern edge of the mound, some distance away from the most recent construction and parallel to a cement-block wall encircling a nearby orchard. The trench reached a depth of three meters, with the lowest consisting of a compacted Halaf Period living surface. The only architectural feature was a collection of small stones, aligned in a rectangle, associated with ceramics, animal bones, and stone tools, located on the floor of the lowest phase. The occupation consists of three phases. Phase 1, the earliest, is on the original sterile soil surface and is defined by a layer of compact reddish clay, possibly containing degraded original *tauf* construction. The ceramics in this phase are completely Halaf, except for two Hassuna sherds.

Phase 2 is a series of compact soil floors, suggesting living surfaces. A series of stone footings with compacted mud above it may indicate a wall, but the degradation makes a conclusive identification impossible. This phase's assemblage also consisted predominantly of Halaf sherds, with a notable concentration of lithics and bones lower in the phase. Phase 3 is the highest occupation phase, consisting of topsoil and a lower brown soil with artifacts. Like the original 1954 excavations in Trench A, this top phase contained later non-Halaf pottery from the Bronze and Iron Age, mixed with a small quantity of Halaf pottery. The reasons for this ceramic mixture are still uncertain and would require further horizontal expansion of the excavation. Overall, compared to

Watson's original excavation, the 2014 Gird-i Banahilk excavation largely confirmed the initial results, working with a much smaller excavated area.

Concurrently with RAP's excavations, I surveyed an area of Soran. The dissertation focuses specifically on the Sidekan subdistrict, but I recorded additional sites in the Rowanduz district and Diana subdistrict of Soran. Since the time of the survey, the Rowanduz district was separated from the Soran district, and the exact division of those sites is not clear from my data. Sixteen sites in the survey are in the Diana subdistrict and Rowanduz district, with one additional site on the border with the Mergasur district. The Soran Department of Antiquities and the Atlas of Archaeological Sites of Iraq (a.k.a. "Atlas of Iraq") served as the foundation of knowledge regarding existing sites in the region (Salman 1976). Twenty-one sites from the Atlas of Iraq fall within RAP's survey boundaries, twelve of which were provided names. Of the sites in the Atlas of Iraq, RAP either excavated or surveyed Gird-i Dbora, Gird-i Dasht, and Gird-i Banahilk. Another site, Malayan, is located nearby Gird-i Dasht on the Diana Plain, but a fence prevented pedestrian survey of the site, although Zettler and Danti briefly surveyed the small mound in 2012. An additional three sites to the south of Rowanduz, Gird-i Raza, Ashoot Kelee Kharand, and Kharob Beth Horab, were nearby sites surveyed by RAP and may possibly be associated with our RAP designations.

Two of the named sites, Hawdian and Diana caves, were excavated by Fuad Safar, described in the preceding Previous Archaeology section. Another cave site, Koyespi Cave, was mentioned in passing by Hamilton in his discourse of the road's construction along the Dergala Gorge towards Iran. Two other named sites, Qalat Barda

Biana and Gird-i Lakotan, are located on the western and eastern edges of the Diana Plain, respectively, but we did not locate their modern positions. The remaining unnamed sites were not located. A brief survey of Gird-i Dbora in 2016 by myself and Abdulwahab Suleiman recovered 18 sherds, with three diagnostic sherds. This limited dataset, combined with three sherds from the Antiquities Department's previous collection, may suggest a Late Bronze, Iron Age, or Islamic date, but the paucity of diagnostic sherds cannot provide any confirmation of that fact. Compared to other regions, the Archaeological Atlas of Iraq presented little information about this region's occupation, with the few mapped sites largely centered around the Diana Plain or caves nearby the Rowanduz River. Unfortunately, the sites on the Diana Plain, and the Soran district overall, are threatened or already destroyed by the encroaching development around Soran and Rowanduz.

Overall, the recorded sites in Soran with pottery sufficient for dating skew later, to the Islamic and Ottoman periods. Interestingly, pottery comparable to that in the excavations in Operation 2 at Gird-i Dasht does not appear apart from collections in its immediate environs gathered during survey. The earliest occupation of these sites is at Gird-i Khiwet, tentatively indicated by handmade ceramics with chaff temper, along with a stone pestle (Kaercher 2014, 74). Apart from the excavated Halaf style pottery at Gird-i Banahilk and Bronze Age ceramics at Gird-i Dasht, the next earliest material dates to the Iron Age, from the Department's rescue excavations and survey around Gird-i Dasht. Later Islamic pottery spans across the surveyed and excavated areas of Soran.

Survey sites recorded by RAP are either located through a more intensive pedestrian survey or located with the assistance of local authorities and guides. Pedestrian excursions from our dig house in 2013 located eight sites in the Handrin Valley, south of Rowanduz town, an inventory of which is included in the Survey Gazetteer in Appendix B. A near-complete lack of accompanying ceramics does not provide a date for these sites, but a limited collection indicates late occupation, most likely Ottoman. One site, Qalaat Zerr (RAP09), is perched on a stone promontory, overlooking the southern route from the Rania Plain; it contained a series of stone walls, preserved more than a half meter high in places. Its name derives from the locals' belief that Saddam Hussein buried his gold on its peak. Its use as a military fortification during Saddam's era is confirmed by military detritus, though buried gold is unlikely given the height of the bedrock there. The remainder of the sites in the area are similar, with less topographically intriguing locations. Sites in the Handrin valley were limited to small standing walls, their antiquity questionable, and one site uncovered by construction, revealing a small wall. Outside of the Handrin valley, local authorities or informants led to the remainder of the sites. Only one, Gund-i Hawdian (RAP38), was located without previous intelligence. Located on the road near Hawdian in a relatively old road cut, the site consists of 15m of occupation, with a decent collection of pottery. We collected ten sherds with a notable lid and decorated body indicating an Islamic date.

Locating sites is useful not only for dating the area but also for understanding the utilization and adaptation of the landscape's topography. One site, Qalaat Kani Sukkar (RAP39), is located on the border with the Mergasur subdistrict. Conversations with

nearby villagers directed the team to an old fortress high on the nearby mountain. Its dating is unknown since it only provided a handful of generic body sherds and brick fragments. At the peak of the mountain, 300 m above our starting point in the village, was a small stone watchtower, with architecture that appears to be relatively modern but certainly predated the Iran-Iraq War. In Hamilton's account of the area, he lists and describes the police and military towers along this valley but does not mention this location. In all probability, it dates to the Ottoman or Sorani Emirate periods as a position to monitor much of the valley. Without further investigation of surrounding hillsides, it is impossible to know whether this tower was part of a more extensive system, but it bears similarities to the watchtowers surrounding Qalaat Lokhan, which at least circumstantially suggests its role as part of the Sorani Emirate network. The trek to the mountain's peak did reveal a series of terraces, hundreds of meters higher than the surrounding valley. The most extensive terrace is located 100m below the watchtower and the peak, perhaps suggesting a more accessible agricultural production zone for the residents of the watchtower.

Chapter 4 : Excavations of Gund-i Topzawa, Ghaberstan-i Topzawa, Sidekan Bank

Alongside RAP's excavations in the Rowanduz and Diana subdistricts were excavations of Gund-i Topzawa, Ghaberstan-i Topzawa, and Sidekan Bank, discussed in this chapter. These sites were excavated with the permission and direction of the Director of Soran's Directorate of Antiquities, Abdulwahab Suleiman. Three of the sites, Gund-i Topzawa, Ghaberstan-i Topzawa, and Sidekan Bank, were revealed and damaged by contemporary construction, prompting RAP's quick response and excavation. A discussion of the Mudjesir and Qalat Mudjesir excavations is included in the following survey chapter (Chapter 6) alongside survey results from the environs surrounding the modern village.

Gund-i Topzawa was discovered during road construction along the Topzawa Valley. When earth movers widened the existing dirt path, cutting away sections of the hillside, the machines exposed a lengthy section of the valley. Among the many graves and walls revealed during this process was Gund-i Topzawa. The site stood out for its concentration of walls and wide, thick charcoal burn layers on the associated floors. Excavation and survey uncovered at least six structures, dating from the late 2nd millennium BCE to mid-1st millennium BCE. Based on the excavation of the buildings' rooms and ceramic analysis, these structures were farmsteads, likely part of the same cultural sphere as Muṣaṣir.

Ghaberstan-i Topzawa was a tomb in the Topzawa Valley uncovered and partially destroyed by the same road widening operation that led to the discovery of Gund-i Topzawa. Located further upstream in the Topzawa Valley, mere kilometers from the Iranian border, the tomb marked the last area of the valley before a rapid ascent into the heights of the Zagros Mountains. Its main structure was a stone-built “bee-hive” shaped tomb, with its entrance destroyed by the construction. The tomb's primary use phase was in the latter half of the first millennium, with Achaemenid material culture and a post-Achaemenid radiocarbon date. Accompanying the tomb was a small subterranean structure of uncertain use.

Sidekan Bank was a rescue operation of a small site along the main road in Sidekan, partially destroyed by the poured concrete foundations for a bank. During the laying of the building’s foundations, several large pots were cut through, prompting Abdulwahab Suleiman and the Antiquities Department to ask for RAP’s assistance in conducting a site assessment and recording any archaeological materials. The site lacked major architectural features but contained multiple surfaces, at least one with burning. A seal with indistinct iconography, made of glazed frit or some other composite material, is a indicative of Sasanian occupation and dates the site to that period.

While the original research goals of RAP did not include excavations of these sites, the ability to uncover material from multiple locations in this area provided an opportunity to understand the settlement dynamics of Sidekan. Further, three sites' accidental discoveries, unrelated to any topographical features that would have revealed their subterranean location, provided an unbiased, or differently biased, set of sites. The

goal of this publication and discussion of the following four sites is to establish the chronological range of occupation in the area, the types of settlements, and their relationship to the surrounding topography.

Recording & Data Management

Excavation recording methodology for RAP is based upon the system originally used at Nippur and further adapted at Tell-es Sweyhat in Syria, led by RAP Director Michael Danti and Associate Director Richard Zettler, respectively. Context recording is based on an Operation, Locus, and Lot system. Operations are laid down over interesting features or areas suspected to contain valuable archaeological data. Often, the Operations conform to the topography of the site. This system differs from other excavation methods in which excavators subdivide the site into a grid of regular sizes based on the grid. In that system, locations are recorded using the grid's numbering. Often in this system, the excavation trenches are placed along the grid lines. While each methodology's relative pros and cons could be discussed *ad nauseam*, each method has at least one point in favor of its use. The grid methodology gives more control over the size of the excavation and, when leaving a small balk between squares, guarantees a complete section to draw and record. However, using arbitrary Operation areas can better capture the full extent of the architecture or area under analysis and more quickly begin an excavation, as excavators are not required to create a grid at a site beforehand. In the Sidekan area, where our excavations are guided almost entirely by what was exposed previously on the surface, the Operation methodology captures the architecture and areas in question more fully.

Within each Operation, the contexts are recorded using Locus and Lot. Loci are primarily used for defining a discrete area, like the interior area of a room. Lots are used mainly as a vertical division, originally used to define distinct changes in soil stratigraphy but can be adapted for any change within a locus. For example, a room bounded by four walls would be one locus, and as soil changes from clay to plaster, a new lot is opened. Used correctly, this system allows for a high degree of vertical and horizontal control, describing the elevation of finds and their relationship to other areas at the same elevation. These recording fields, along with the site name, are combined to document all artifacts recovered during excavation – SITE.OPERATION.LOCUS.LOT – resulting in collections like GT.1.6.3, for example. Collection units, bags, are assigned numbers, mostly sequentially given the order of bag tags available to the excavator. The date of the excavation and excavator is included as well. Ceramics from the excavation are recorded with the Locus-Lot system and separated by day. Processing occurs off-site, in the lab or another suitable location.

While the data were primarily recorded using analog methods and digital photography, I processed, organized, and analyzed the material using a relational database. The software used was Airtable, a “freemium” (i.e., free until hitting storage allowances or other limits) cloud-hosted database. Utilizing a relational database with “one-to-many” connections allowed adding not just the entire corpus of excavated material but material collected on survey, survey information, and related info from other sites. Throughout this research, beginning in 2013 up to the present day, advances in technology and freely available software changed the possible limits of what individual

scholars can digitally create. Specifically, in the case of databases, the rise of "No-Code" software platforms enabled the creation of advanced databases with only the basic understanding of lists and structures. Airtable is only one of the vast growing catalog of No-Code software platforms (nocode.list 2019). Those changes, still ongoing and accelerating, reframe the digital divide in scholarship and alter how archaeologists can conduct research.

For four decades, the field of Digital Humanities grew as a way for humanists to confront the growing prevalence and power of digital tools in the academy (Burdick et al. 2012, 10). While some embraced this change, others simultaneously adopted the label while decrying technology's imposition into the rarefied study of the humanities (Khanwalkar 2017). While there is no single definition of Digital Humanities, one offered by Burdick et al. captures the ambiguity and changing nature of the sub-discipline: "the area between the humanities, in its full richness, and 'the digital.' The digital is taken to include information technologies, digital media, and different types of digitally-enabled modalities, tools, and expressions" (2012, 5). Explicit in that definition is the delineation of 'the digital' as a discrete field, in opposition to the humanities. Simultaneously, however, many digital humanists recognize that technology is only a tool and that use of that tool is what makes a humanist a digital humanist. With that expansive definition comes the insight that digital humanities are as much a question of salesmanship as it is a scholarly debate (Kirsch 2014).

There was a time, as the field of Digital Humanities grew, in which the ability to use digital tools required discreet skills. As Drucker emphasizes, tools are not neutral

artifacts, and digital tools are far from exempt from that reality (2020). Thus, while there is value in understanding these tools' power and capabilities, as any tool in academia, the debate within Digital Humanities has too often been whether humanists should learn the skills required to build and operate these tools (Kirsch 2014) fully. For specific digital tools, knowledge of the technical foundations or use of coding is essential, while others only require a basic understanding of the logic. After the mass migration to remote and digital work beginning with the outbreak and subsequent isolation caused by COVID-19, the digital is fully ensconced in every aspect of modern lives, including humanities scholarship. Thus, sequestering the Digital Humanists from humanists is no longer a necessary division and serves only to add unnecessary barriers for scholarship writ large.

One of the most fundamental tools for archaeologists, either digital or analog, is databases. Databases are how we mediate the objects in the ground and transform raw archaeological material into the data underlying interpretations and conclusions. Whether the databases are advanced, fully relational systems requiring a dedicated technician, a series of computer folders, or hundreds of drawers of physical find cards, how we store and structure data informs how we analyze and understand the past. Since at least the 1980s, archaeologists have attempted to build digital ceramic databases, in part, with the dream of creating fully connected datasets across sites and regions (Blakely and Bennett 1989). In many ways, databases will always be an interface between the researcher or excavator’s chosen research question and the available material (Bennett and Blakely 1989, 8). A good report and database rely on a clear understanding of the objectives before beginning the research (Peacock 1977, 33). While traditional relational databases

require a fair amount of foresight, planning, and maintenance, no-code databases allow for agile input and data manipulation. Their ease of use is spurring a renaissance in digital access, not just in academia but in the world writ large (Gaggioli 2017). No-code databases allow archaeologists to manipulate data as the research questions change, a capability previously out of reach for individual researchers. Further, the ease of the software platforms makes the initial collection of data digitally far easier.

As digital analysis tools become more accessible and affordable, a corresponding problem is their constant evolution and changes, creating a possible future in which corporations control and can delete entire databases. Thus, archaeologists must consider digital archival reconstruction in parallel with publishing final reports using these advanced digital tools. For example, while the Airtable database provides easy access to related contexts and artifacts, the system's fundamental architecture is no different from the basic system of card catalogs. By downloading Comma Separated Value (.csv) files that provide the same information in raw text form, researchers can submit that data to a repository in the university, so future scholars can reconstruct the archive – not unlike the hordes of graduate students in recent decades who spent countless hours going through card catalogs and paper records to reconstruct legacy excavation data. Accompanying this dissertation’s figures, appendixes, and online material are folders representing the raw data.

The Airtable database structure is fundamentally based on the field recording structure with progressively decreasing levels of detail. At the highest level is the site – sites located on Survey are stored alongside the excavated material from Gund-i

Topzawa, Mudjesir, Ghaberstan-i Topzawa, and Sidekan Bank (although not all sites are published in the accompanying online database). The Context table includes all published sites' Operation, Locus, and Lot, with each record a distinct combination of the three dimensions. Bags, an additional table, record the excavated material related to each context, mirroring the physical bags. Each context's day and type of material (bone, pottery, charcoal, etc.) merited a unique bag number. A further level of detail was individual sherds related to their original bag number (ex. 627.4 represents one of at least four sherds from Bag 627). Providing a linkage between these tables is the Phases table, representing the chronological and stratigraphic phases generated through post-excavation analysis. An additional feature of the database is the addition of typologies – both the typology created to organize the excavated ceramics and typologies from comparable projects that allow for quick comparison of material. The intention of the publication of the vast quantity of excavated material is, in part, to promote transparency of source material, in part to allow greater and easier access, and in part to enable future scholars' research projects utilizing the material published as part of this dissertation.

Gund-i Topzawa

Of the multiple sites excavated by RAP over four seasons, the most significant and complete is the site of Gund-i Topzawa (36.81750 N, 44.73472 E). As mentioned previously, large-scale road widening operations from Sidekan up to the Kelishin Pass cut into the hillsides above the Topzawa Çay, exposing a multitude of archaeological materials. The most extensive of these sites was Gund-i Topzawa, a series of houses

along the valley's hillslopes. The site is noteworthy for its location along the primary throughway from the town of Sidekan to the Iranian border.

Gund-i Topzawa lies at the inflection point where the hill's slope meaningfully increases. The valley's wide basin below the site allows for agriculture, including plowed fields along the Topzawa Çay and orchards along the slightly steeper banks above the lightly sloping floodplain. Above these orchards, at the line of the modern road, the valley's large hills begin quickly sloping upwards at about 18°. Gund-i Topzawa and the other sites exposed in widening the road lay at this change in slope. This location's significance will be discussed further in the Survey Chapter, but comparable modern and ancient sites in Sidekan and Kurdistan are often built at this slope inflection point, cut directly into the hillside. Modern houses at Choman are characteristics of this style (Figure 4.1).

Gund-i Topzawa is 20 km from the Kelishin Pass as the crow flies, but much further when taking the arduous journey by foot or vehicle. In antiquity and modern periods, this route forms an integral connection between the two sides of the Zagros Mountain *chaine magistrale.* In addition, the site is a moderate distance from the known occupation centers, about 8 km from modern Sidekan, 13 km from Old Sidekan, and 11 km from Mudjesir, likely requiring at least a half day's walk to reach these destinations. This distance from population centers defines Gund-i Topzawa as an outlying or rural settlement. Thus, determining the site's architectural and material arrangement as well as its relative wealth and status helps elucidate the relationship between the central occupations and rural regions.

Figure 4.1: Traditional Building at Mudjesir

In 2013, after the construction teams moved along the Sidekan-Kelishin Road, cutting into the hillside and exposing archaeological remains, Director Abdulwahab Suleiman asked a portion of the RAP team to assist in surveying the damage. Large stone walls, along with the thick and lengthy layers of burning, immediately attracted our team's attention as they surveyed the road cut by automobile. In the season's waning days, Dr. Michael Danti and Dr. Darren Ashby recorded the exposed section of Gund-i Topzawa. It measured 100 m along the length of the road cut, attracted attention, and necessitated documentation. In addition to recording the site's exposed section, the team

recovered charcoal samples and sent three promising samples to the University of Arizona AMS Laboratory for testing. While two further excavation seasons would elucidate the relationship between these walls, floors, radiocarbon samples, and occupation phases, this section provides an overview of the overall site's layout (Figure 4.3).

Gund-i Topzawa, while discussed as one site, is more accurately two clusters of buildings, with a virtually empty middle consisting of only a few fragmentary structures. Gund-i Topzawa East (GT-E) is about 30 m long and contains two clear buildings, Buildings 1-E and 2-E, with some undefined connection between them. Gund-i Topzawa West (GT-W) begins about 35 m west of the westernmost wall of GT-E. GT-W consists of four buildings, Buildings 1-W, 2-W, 3-W, and 4-W. The intermediate space between GT-E and GT-W, aligning with a bend in the road, has a few traces of architectural features. Only one small possible structure was defined. It is an unnamed structure with two walls and a small, 2 m wide area with significant burning. There are no other traces nearby, and this structure was not investigated further. This gap in structures may be because of the hill's slope above, with a slight impression that would lead to increased rainfall and runoff, making occupation or construction unnecessarily onerous. In this portion of the road cut section and at other points along the construction cut were destroyed or damaged graves believed to date to the Islamic period. The construction method, gravestones, and depth below the surface provide evidence of this dating, but our team did not investigate these graves apart from recording their existence and locations.

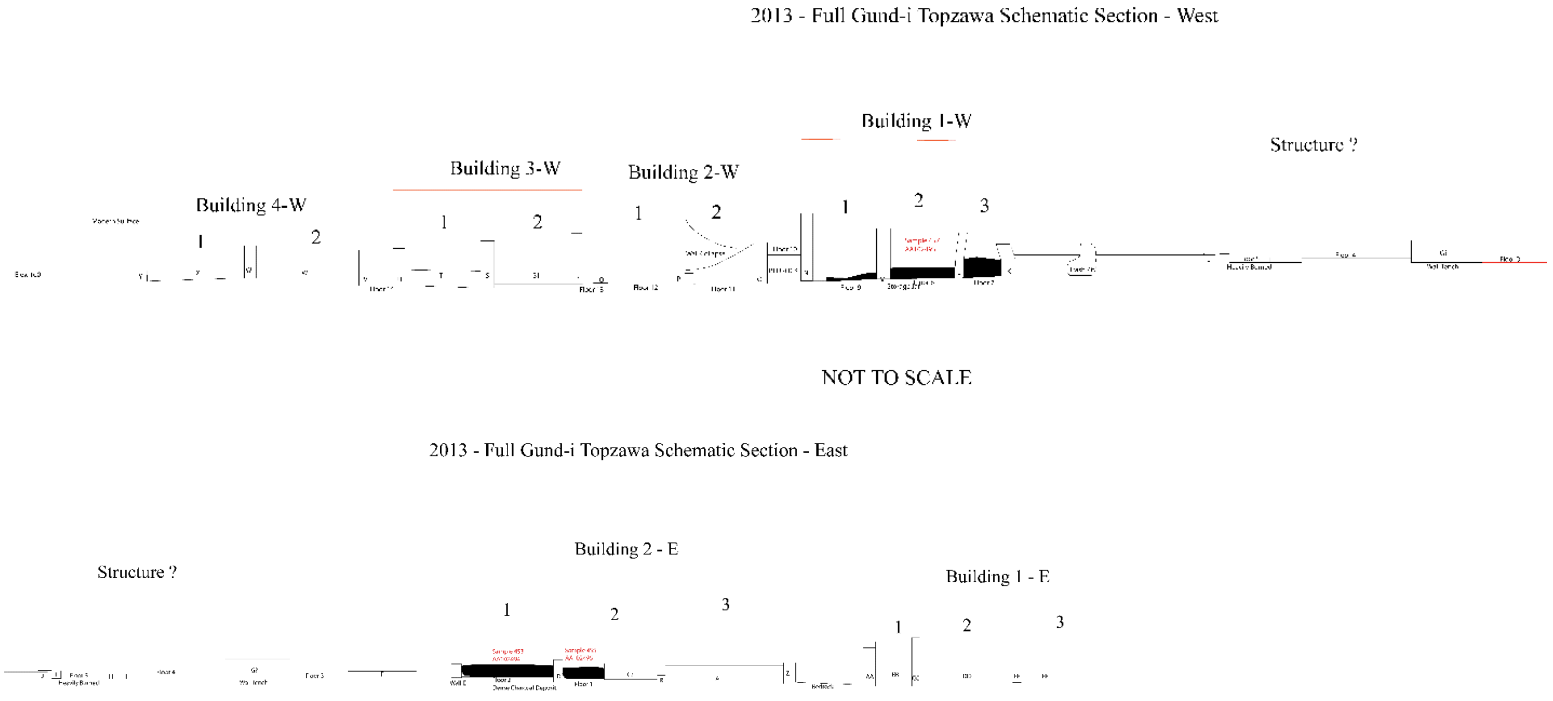


Figure 4.2: Full Gund-i Topzawa Section. Split East and West

RAP excavated Buildings 1-E, 2-E, and 1-W, collecting large quantities of pottery and other finds, as well as multiple charcoal samples. Building 1-W dates to three separate periods: Phase A, the earliest level built below the structure of Phase B, to the late 2nd or early 1st millennium, likely Iron I or LBA; 1B, the main structure, dates to approximately the 7th-8th centuries B.C.E., Iron III, contemporary to the Urartian Empire to the east and the Neo-Assyrian Empire to the west; Phase C, the final squatter phase in the Achaemenid Period, Iron IV. The excavation's radiocarbon samples, combined with the 2013 section cleaning samples, provide a possible breakdown of occupation periods at the site. Radiocarbon dates from Building 1-W suggest the main building's main phase, Phase B, was destroyed sometime in the first half of the 8th century (roughly 800-750 BCE). From the site's eastern portion, Building 1-E's single carbon sample dated from ~1213-1127 BCE. The neighboring Building 2-E had two carbon samples, one dating to 1050-925 BCE and one to 925-825 BCE. The full analysis of the carbon samples and the implication for the site's chronology and occupation phases are discussed in detail below, but the overarching conclusion is Gund-i Topzawa was a collection of buildings built into the hillside over centuries. Although there is some evidence for reoccupation and reconstruction of the same buildings, most reoccupation appears to be new homes constructed alongside destroyed ones. While the range of dates covers multiple centuries, they correspond to the main historical period at Muṣaṣir.

After the promising information from the limited section cleaning and carbon sampling in 2013 at Gund-i Topzawa, excavations began in 2014. All the excavations took place in 2014 and 2015, with the bulk of Building 1-W and limited work in

Buildings 1-E and 2-E. The extensive exposure of walls and burnt floors of Phase B in Building 1-W revealed by the construction activity led to the focus on that structure. Given the nature of the Gund-i Topzawa – a 4 m+ tall section cut into a steep hillside with much of the architecture visible – the excavation methods were somewhat unconventional. Rather than lay down a rectangular trench of predetermined and arbitrary dimensions, the team defined the walls' limits and excavated the area within the walls. While this excavation method allowed for increased certainty in the plan of action, it resulted in excavated areas completely circumscribed by stone walls. Thus, some of the sections that may have been useful in understanding the exact relationship between collapse, walls, and surfaces, were removed. Despite that difficulty, the excavation resulted in a clear picture of a structure used for domestic purposes and destroyed in a fire.

Building 1-W

Architecture & Stratigraphy

Building 1-W's primary use phase dates to the 8th century B.C.E., confirmed by radiocarbon dating and ceramic parallels (Chapter 4, Gund-i Topzawa Radiocarbon Dating). Two additional phases bracket the main occupation: an earlier phase, revealed during an excavation in the road, and the late phase, consisting of at least one burial on top of the collapsed structure. I dubbed these three phases A, B, C, with A representing the earliest remains, B the main Building 1-W, and C the later burial. In addition, a small squatter occupation existed after phase B's destruction but before the burial in phase C. That occupation consisted only of ash and pottery but was not deliberately arranged and

poorly recorded, thus not requiring a distinct phase. While our excavations revealed nearly the full extent of Building 1-W Phase B, the extent and nature of architecture in Building 1-W Phase A are mostly unknown. Thus, an analysis of the architecture must begin with Building 1-W Phase B, then continue backward and forward in time to reveal the preceding and succeeding periods.

Building 1-W Phase B

Building 1-W Phase B, a.k.a., Building 1B, consisted of three rooms: Rooms 1, 2, 3 assigned from east to west (Figure 4.3). Room 1 and Room 3 abutted secondary deposition material that divides the structure from nearby walls, thus the building's exterior walls. The space between Room 3's western wall and the adjacent Building 2 was less than a meter. Given the absence of dense layers of charcoal, like that in Building 1B, along with the minimal finds, this area was an outdoor space between buildings. The area to the east of Room 1's angled wall lacked any of the distinctive burning of Building 1B, and no walls were nearby this eastern extent of the building. A small excavation into the north of the walls, directly into the hillside, uncovered a small collection of walls but lacked any significant connection or continuation to suggest a continuation of the building into the hillside.

Figure 4.3: Gund-i Topzawa Building 1-W Phase B Full Plan

Building 1B's walls were constructed with horizontally laid large stone slabs, interspersed within many small stones and chippings. This technique is typical for a wide variety of ancient and modern structures. Stone chippings, small and slender bits of slate, fill in the gaps between the larger stones. Comparing the walls of Gund-i Topzawa to contemporary houses, the stone construction bears numerous similarities (Figure 4.1). This serves as evidence for the type of construction well suited for this area and the materials available. The combination of construction technique and its poor location at the base of a hillside precluded its use as a defensive position. This mixture of stone slabs and small chippings was an easy and convenient way for constructing large walls with minimal effort, though its dry-laid nature does come with risks for a structural collapse. Further, comparing Gund-i Topzawa to comparable house construction in the Sidekan area, buildings' ground floor often served as an open storage and production area. The rooms' proposed functions at Gund-i Topzawa align well with that interpretation. Large bedrock outcroppings, unremoved before construction, jut into the living space of the ground floor rooms are features that correspond well with the rooms' proposed use for storage and production.

Rising about 3 m from its excavated base to the exposed top was the rear wall at the north of the building (Wall 1), a central structural feature of the site. Clearing the top of Wall 1 revealed a single interconnected wall running across the entirety of the building, with most of the wall resting on the bedrock foundation below. Three other walls jutted out perpendicularly from Wall 1. The eastern exterior wall (Wall 2) angled northwest-southeast, and two north-south walls (Walls 3, 4) abutted the north wall,

forming two rooms, while the exterior north-west wall (Wall 5) formed the western exterior of the building (Figure 4.3). The road widening operation damaged all of these perpendicular north-south walls, though it is nearly impossible to define how far the walls initially extended. Notably, Wall 4 contained a doorway between Rooms 2 and 3. The wall ran directly up to Wall 1 but did not join. Room 1 may be a later addition, with Wall 3 as the original exterior wall, or its construction was contemporary but added on as a distinct semi-outdoor occupation space. Building 1B's walls were built, at least in part, on bedrock or utilized bedrock as a foundation. Northern sections of all the walls were perched on these unique bedrock spurs. This construction, a necessity caused by the substantial and irregular outcroppings of bedrock in the area, weakened the walls' structure, evidenced by cracking and slumping between the bedrock and non-bedrock foundation points. The individual room's construction revealed the usage patterns of the complex and the site's chronology.

Room 1 was a triangular space about 2.05 m wide (E-W) at its widest point and 1.4 m long (N-S), with its two remaining walls converging in the north. At the rear of Wall 3, the tallest point of the room measured 13 courses of stones in height. At the convergence of the three walls, the lower courses of Wall 2 curved inward towards Walls 1 and 3. The lower, curved section of Wall 2 ran directly against an outcropping of bedrock below the northernmost section of Wall 3. All of Wall 3 was built on bedrock, with the wall's rear stepping up one course where the bedrock rises.

Above the wall's curved section was a small niche, its base 1.6 m above the room's floor. The small box's left wall had leaned inwards and turned, creating a space 25

cm wide at the front and 42 cm wide at the back, with a small stone slab serving as a roof for the niche. The box's base was a stone slab, spanning both sidewalls' width but resting on a collection of soil fill and small stones above curved courses of Wall 1. On the left and right sides of the niche were small and moderately sized stones. At approximately the same elevation, 1.6 m above the floor, was a small gap in the stones of Wall 3. Far smaller than the stone niche, this space measured one course tall, approximately 10 cm, by ca. 40 cm wide. From above, there was a noticeable gap between the corner of Walls 1/3 and Wall 2b (Figure 4.4). Below the niche, however, Wall 2 runs up against Wall 1.

Figure 4.4: Top-down View of Room 1, Gund-i Topzawa Building 1-W Phase B

Room 1 had several notable features that provide clues to the activities performed in the room in antiquity. Two or three large pithoi were in the northeastern rear of the

room. Two of them rested on the floor at the northern end of the room and were propped up by several stones around their base (Figures 4.5, 4.6). One of the pithoi (Plate 44.2) had thick walls of over 5 cm, and another (Plate 44.1) had thinner walls with a very elongated and flat rim. These vessels' total capacity could not be determined with the number of sherds and the positioning, but both stood at least 60 cm or higher, given the rim sherds and the connected pieces. The third pithoi may exist, but the rim sherd lacked sufficient preservation to confirm that designation. Nearby these pithoi, in the southeast of the room, was one large fragment of a *tannur.* Given its findspot, directly next to the destruction caused by the road construction, further fragments were likely destroyed or removed in that modern process.

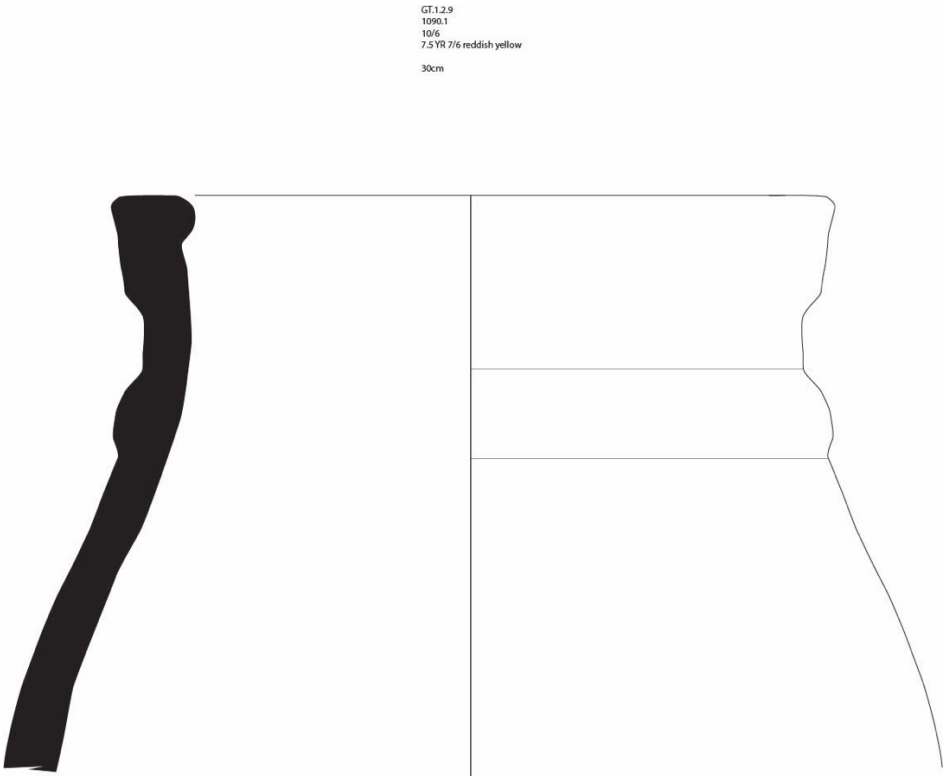


Figure 4.5: Room 1 Pithos (Plate 44.2)

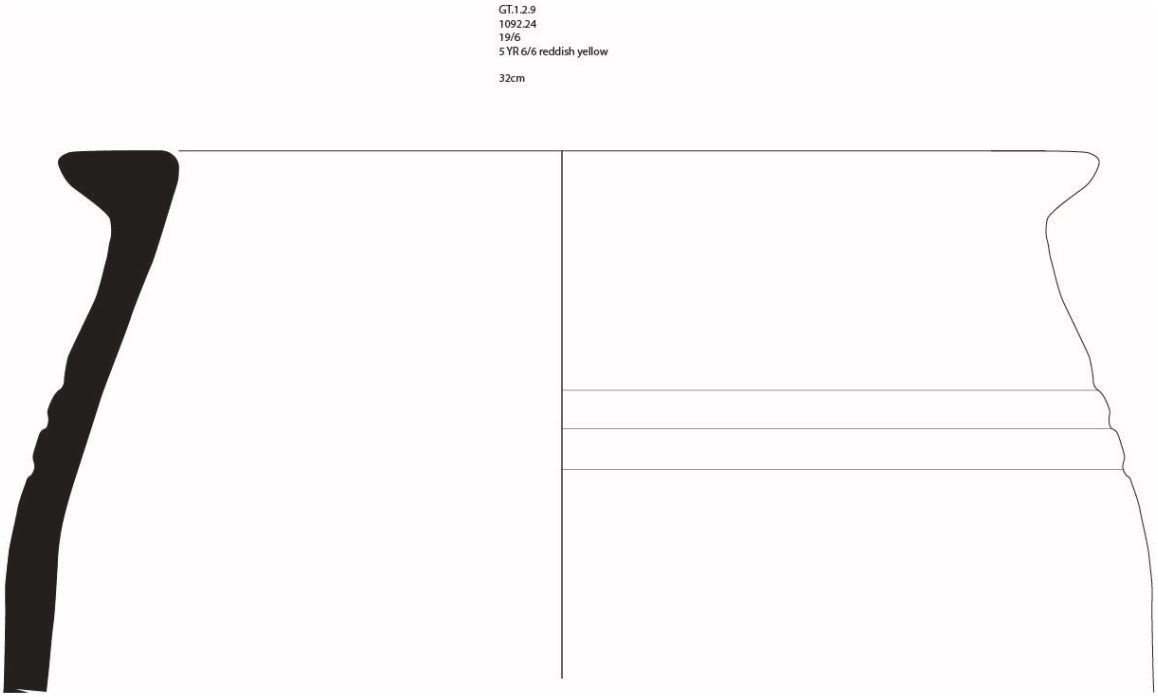


Figure 4.6: Room 1 Pithos (Plate 44.1)

The room's western side did not contain large pithoi and pots like the east but was distinguished by large amounts of ash. South of the northwestern corner of the room was a large hearth with a heavy concentration of ash. Roughly circular, it measured 22 cm N-S, 25 cm E-W by 5 cm deep. Its cross-section showed a series of striated ash lenses above the floor. Directly to the north, in the northwestern corner, was an additional concentration of ash but dispersed over the floor's surface, likely originating from the hearth. A spindle whorl, Object 525, was recovered in the southwest of the room, near the hearth. The object was only partially completed, as the parallel holes on either side of the clay disk did not fully connect. In the center of Room 1's floor was the largest concentration of burnt charcoal material.

The original floor of Room 1, below the final occupation surface of Building 1B, was a reddish clay with small stone splinters integrated into the surface. During the

destruction event, the floor in use was light brown, also with stone splinters, and heavily burned. A 1 cm thin dark yellow cover of silt lay on top of the floor, and a 27 cm thick layer of burning and stone collapse sealed the final occupation in this room.

Fortunately, the catastrophic conflagration event at Gund-i Topzawa resulted in a bounty of archaeobotanical material. Most of the recovered and analyzed archaeobotanical samples came from the excavations in Room 1, and their analysis can help reconstruct the purpose and function of the room. Five samples in Room 1 had significant seed evidence. A wide variety of species were present, including grains, legumes, and a wide variety of fruit, including grapes. In addition, there were many types of weeds commonly found in grain stores in the later processing stages. Of the cereals, barley was the most common, with 23 grains in one sample alone. There was, however, little evidence of cereal processing, with only a few rachis fragments. Along with the cereals were pistachio, rubus, fig seeds, and grapes, as well as several legumes, including field peas (Proctor and Smith 2017).

The high number of grape seeds and the associated components of the plants is striking. All of the Room 1 samples contained at least ca. 20% grape, with two containing more than 75% grape. The samples included large and small grape pips, intact fruits, grape skin, and pedicels, the small stalks that hold grapes into the bunches. The pips were combined with skins, pedicels, and the occasional intact fruit (one intact grape in both samples 1099 & 508). The number of pedicels with pips can be indicative of fresh grapes or raisins. Margaritis and Jones'(2006) experimental study of wine production noted the proportions of pips, pedicels, and skin fragments that often accompany wine production.

In addition, by charring raisins and fresh grapes and examining the skin under a scanning electron microscope, they were able to identify subtle differences. Examination of the grapes' charred skin at Gund-i Topzawa was inconclusive, although it did not preclude an identification as fresh grapes for wine. Proctor (Personal Communication) does note, however, that Gund-i Topzawa has no apparent wine processing or production tools.

The samples' specific location and their relative amounts of archaeobotanical material in Room 1 may provide clues to the room's activity and the vegetation surrounding the site. One sample (505) had an incredibly high proportion of grape remains, over 85%. That sample originated from the ash lens in the hearth. The remaining seeds in the sample came from legumes. The other sample with a high proportion of grape remains (1083) had ca. 75% grape, with 10% weeds and small amounts of cereals and legumes. We do not have its exact location, but it came from around the back pithoi, at least 30 cm above the floor. Proctor suggests it came from the upper layer of collapse and burning from a probable roof rather than from the pithoi. One sample with a more secure location (508) had a high percentage of cereal, approximately 75%, with 20% grape. It was collected in the collapse directly above the surface next to one of the rear pithoi, possibly reflecting the contents of the destroyed pithoi. Sample 1099 was collected nearby, in the same loci, but contains over 50% weeds and ca. 25% grape. The findspots' relationship to weeds and grapes complicates any interpretation of wine production. The high proportion of weeds indicates cereal processing, as well as a possible mud roof covering that fell into the room upon the building's destruction.

The limited vessel types in Room 1 are quite instructive on its possible use (Full typology: Appendix A). For one, bowls dominate the room's assemblage. Almost half of the room's diagnostic sherds (10 out of 27, 37%) were bowl rims. Further, these vessels were of broadly similar types, carinated bowls. Three were Bowl 3 types, carinated with a deep body, while five were carinated with much shallower bodies (types 6a, 6b, 7). The two remaining bowls were more rounded but had the slightest evidence of carination (types 8 and 11b). All of these bowl sherds were either in situ on the floor of the room or in the collapse immediately above the floor.[83] The second most common type of pot in the room was holemouth jars. All but one of these examples came from either the floor itself or the context directly above the floor and largely clustered in the southwest of the room, around the area of the *tannur* fragment.

Building 1B-W Diagnostic Vessel Types by Room

	Room Number		
Vessel Type	Room 1	Room 2	Room 3
Base	7.41%	12.50%	4.35%
Bowl	37.04%	24.04%	17.39%
Cup	3.70%	2.88%	
Handle		4.81%	4.35%
Jar	18.52%	22.12%	17.39%
Lid	3.70%		
Pithoi	7.41%	2.88%	2.17%
Plate		2.88%	2.17%
Pot/Holemouth Jar	22.22%	27.88%	52.17%

Percent of Sherds by Vessel Type, as a percent of each Room Number's total sherds.

Table 2: Distribution of Sherd Vessel Types, Gund-i Topzawa Building 1-W Phase B

[83] Note that the context directly above the floor included collections of both in situ pottery on the floor and in the collapse ca. 5 cm above the floor.

To the west of Room 1 is Room 2, the largest space and primary focus of the excavation. Measuring 3.7 m wide (E-W) by about 3.5 m deep (N-S) at its widest preserved point, this space is connected to the eastern Room 3 by a doorway in Wall 4. Wall 3 divided Rooms 1 and 2, and the surviving section of the wall was built on the same bedrock outcropping noted in Room 1. The wall is twelve courses tall in Room 2, as the floor in Room 1 is approximately one course lower than Room 1's floor. The corner between Walls 1 and 3 was bonded, as evidenced by a top-down view (Figure 4.4). The tallest remaining portion of Wall 1 was in Room 1, rising the full 1.6 m. Beginning in the eastern corner, next to Wall 3, Wall 1 was constructed on bedrock for the room's width. Wall 4 ran up against Wall 1, with no discernable joins but some minimal connection. The northern portion of Wall 4, ca. .75 m, was built upon the same outcropping of bedrock as Wall 1 before stepping down ca. 30 cm and built on ground level. At this step-down, the wall showed a crack, leaning southwards towards Doorway 1. Doorway 1 was 2 m south of Wall 1 and 76 cm wide. The northern jam of the doorway was 10-15 courses high, with the southern jam half as tall as a result of the earth mover's angled destruction. Less than 50 cm of Wall 4 remains south of the door jamb. A jar was on the door sill, smashed by rocks falling from the building's destruction. The southern part of the wall was ca. 60 cm wide. Neither Wall 3 nor 4 showed evidence of beam emplacements.

In the center of Room 2 was a large, flat outcropping of bedrock with two unique clay features, along with storage vessels. Measuring 2.8 m wide (E-W) and approximately 1.8 m deep (N-S), the bedrock under Wall 3 continued southwest into Room 2. It filled the northeast corner of the room and extended about two-thirds of the

room to the west. The bedrock was a slate-like, highly brittle composition. While substantial, this material had a highly irregular and unlevel surface. To make a level platform, the inhabitants of Gund-i Topzawa seemingly laid larger flat stone slabs to remove some of the irregularities. Covering these stones was a hardened clay surface layer. On top of this platform were several features, the most notable of which were the two large round clay features.

The clay features were built on the bedrock platform's stone surface, with the thin layer of red clay surface visible in places. While the diameter of the two features differed slightly, their descriptions are mainly similar. The western feature was between 80 – 90 cm in diameter, while the eastern one measured slightly over 1 m. Vandalization of the western feature damaged its sides and led to the team sectioning and investigating the interior. It was preserved 32 – 40 cm high on its exterior, and the height of the interior was between 26 – 32 cm. The walls were constructed with red clay tempered with stone, hardened through burning, and measured 8 – 10 cm at the base. The walls were slightly concave, with an 82° angle turning inwards to a roughly 70° angle 20 cm above the base. There was no evidence in the section that the original feature was enclosed at the top. The fill consisted of fragments of clay walls, stones from the building's collapsed walls, and charcoal specks. The clay feature's base was the same clay material as the sidewalls but only 3 cm thick. The maximum volume of the preserved interior space was approximately 203 liters. However, the sidewalls likely extended another 5 – 10 cm above the preserved portion, which would yield a volume of more than 260 liters. Although the eastern feature was not sectioned, the exterior mostly resembled its western

twin (Figure 4.7). The following section discusses the possible uses of the features but they appear to be storage bins of some type.

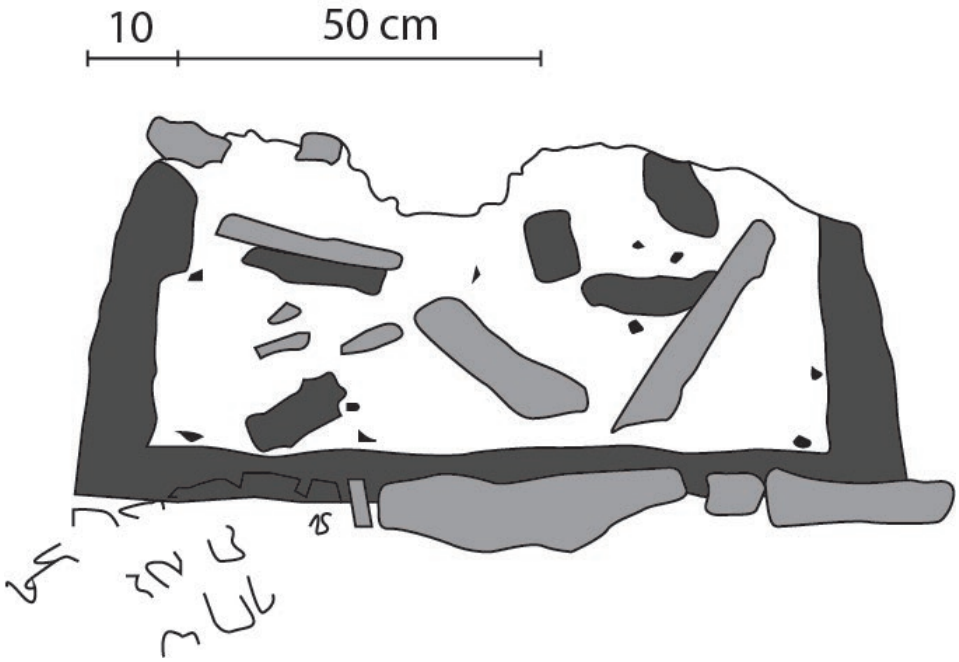


Figure 4.7: Cross-section of Bin 1, Room 2

Also of note on the platform of Room 2 were two large pithoi, located along Wall 3. These two vessels were flat bottomed and deliberately placed on the surface, and surrounded by piles of stones to support their large sizes. The rear pithos' rim was destroyed entirely, thus preventing an exact measurement, but its base's diameter was somewhere in the range of 70 cm. The front pithos (Plate 37.1) had a large 40 cm diameter that bulged to at least 80 cm at the body. As the height remains unknown, we cannot estimate the total volume of either vessel, but their sizes were quite large, especially considering the building's overall dimensions. Both pithoi were filled with dark charcoal indicative of a burned and collapsed roof. We collected a large archaeobotanical sample from the front pithos' (Plate 37.1) contents. While the team

recovered over 10 L of soil, floatation yielded only 20 seed samples. All but one of those seeds came from the grape plant, with one fragment of pistachio (Proctor and Smith 2017). The sample's location, in the large pithos, along with the prevalence of grape, indicates a high probability that this vessel contained wine or another type of grape juice, although it is also possible the grape remains originally came from the collapsed roof of the building.

This eastern extent of the platform was slightly elevated from the remaining extent by this concentration of stones. The bedrock platform's remaining area was a series of subsequent surfaces built around the clay features. In the northwestern corner of Room 2, between the bedrock platform and Wall 4, the soil was notably loose – covered by a hardened layer from the building's collapse. This area of loose soil was surrounded by Wall 1 in the north, Wall 4 in the west, the bedrock in the east, and a collection of stones to the south. This collection of stones was arranged like a wall – small slabs laid on top of each other horizontally, spanning the space between Wall 4 and the bedrock platform. The layers alternated between flat stones laid E-W, approximately 30-40 cm long, and layers of much shorter stones laid N-S. From above, there appeared to be a gap between the two faces, resembling a channel measuring 10 – 20 cm wide. This shoddily built wall ran directly up against Wall 4 and the northern edge of Doorway 1. However, the base of this retaining wall did not reach to the surface below the bedrock platform (Figure 4.8).

Figure 4.8: Top-down View of Room 2, with retaining wall's position shown

The bedrock platform was approximately 1 m above the southern surface, the main floor, at the same elevation as the occupation surfaces in Rooms 1 and 3. The retaining wall base was roughly 30 cm above the occupation surface, resting on a thick layer of soil. The base of the wall was not loose like that to the south. Given the floor's height, this retaining wall may have served to keep any of the loose debris from the northern rear from the primary occupation area.

The floor itself was preserved less than 1 m at its widest western extent, with the southern extent destroyed by the road construction and the eastern section of the floor running against the outcropping of bedrock that supports the platform. Much like Room 1, the floor consisted of an original and final occupation surface. The final floor was approximately 5-10 cm above the original occupation surface. The excavated floor, used

at the time of the destruction, was a hard-packed red clay surface. Above the floor were stone collapse and an orange layer that sloped downwards from east to west. This layer, along with the stone collapse, was visible in the original section of the site drawn before excavations began. Once we completely excavated Room 2, the lower floor and the higher platform indicated that that slope in the section was primarily due to these features. Specifically, the bedrock portion extended into the lower floor area of Room 2, and the stacked stones on the platform's northeast propped up the large pithoi. This elevated area caused the collapsed material to concentrate in the southwest. In addition, there was a large concentration of ash, possibly associated with an oven, in the corner between the retaining wall and Wall 4.

Most of the pottery on Room 2's lower floor was above the charcoal destruction line, covering a layer of debris above the room floor. This area was dense with pottery, including several mostly intact vessels. One, 1104.1, was a fully intact double-handled small jar that closely parallels an example at the Urartian site of Bastam and one found in Tomb 17 at the site of Bard-i Bal (Vanden Berghe 1973). It was found 75 cm east of Wall 4 and 50 cm south of the retaining wall within the stone collapse. Some additional examples include a large base, 9 cm, with a single 1 cm hole at its base (Plate 46.1), along with a moderately large pithos (Plate 49.1), and a wide, deep bowl (Plate 3.3) at least 30 cm deep. Mixed in with the large pottery quantity were two mortars, an iron spearhead, and a door socket to the east. The door socket measured 39.5 cm long, 11 cm wide, and 12.5 cm tall. The iron spearhead and other notable finds are discussed in detail in the following Finds section.

Room 3 was roughly the same size as Room 2, ca. 3.8 m across (E-W) by 3.1 m deep (N-S) at its furthest preserved extent. Like Room 2, the original occupants built the walls upon outcroppings of bedrock. Wall 5, the westernmost and exterior wall, was built entirely on a bedrock outcropping that partially extends into the room's northwest corner. Notably, Wall 5 had three beam emplacements ca. 2.5 m above the floor. Each hole for the beams was rectangular, and all three emplacements are one course above the lower section of Wall 5 that curves inwards towards Wall 1. Thus, this curve, and the small shelf it creates, was the ceiling of Room 3, and the additional meter of Wall 5's stonework above these cavities would have formed the exterior wall for the second story of the original building. Across the room, Wall 4 was not preserved to the same height as Wall 5, preventing the identification of possible beam emplacements in that wall. Given Wall 4's risk of collapse, with a significant lean towards Room 3, the team left a column of soil against the wall.

A final architectural feature in Room 3, Wall 6, may help explain the room's southern extent and Building 1. This wall turns eastwards from Wall 5 at a right angle, in the room's southwest, stretching less than a meter, with a small stub of an N-S wall intact. These two walls form a small space, Room 3a, measuring 50 cm wide. Wall 6 was about 30 cm tall, and its height corresponded to the base of Wall 5, resting on the bedrock outcropping. As the southern continuation of Wall 5 was not excavated, this space's full dimensions cannot be known. The section alone does not indicate whether this space was open or if Wall 6 wrapped around an extension of the bedrock outcropping under Wall 5. If the remaining height of Wall 6 corresponds to its original size, this space could not

have been higher than 30 cm, thus forming some storage, production, or fenced-in space rather than a discrete occupation space. Delimiting the possible southern extent of Room 3 was made possible by a line of stones in the road cut, south of the ditch created during construction, approximately 6 m south of Wall 1. Thus, Room 2 also likely extended about 6 m N-S.

Room 3 contained two floors, like Room 2, an original surface and a final occupation surface. Unlike Room 2, however, the team did not excavate the original floor but rather finished excavations on the later surface. Given the section visible from the roadway, the original floor was about 20-25 cm below the latest floor. Its western side was covered with dark black ash, while the eastern side showed what appeared to be a burned reddish-orange layer. The dark black layer in Room 3 corresponds to the heavy black ash in the lower floor of Room 2. The latest floor, the occupation surface during the destruction event, was also covered in black ash and probably corresponds to the surface in Room 2. Given the column of dirt left against Wall 4 for stability, the team could not trace the floor to Doorway 1, but the section suggests it abutted the top of the doorjamb.

In the northwest of Room 3 was a semicircular hearth or oven, full of dark black ash at roughly the later floor level. In this back corner of Room 3, the bedrock significantly jutted into the room, with three or four large boulder-shaped sections of the bedrock extending as far as a meter into the room. The area of burning was about 85 cm wide. Around the hearth feature were several objects recovered in a mixed layer between the floor and roof collapse. Among these objects were two crude andirons, a tall stand with small feet, as well as a pestle, and possible fragments of a *tannur*. Alternatively, this

area may not have been a hearth, but a concentration of burning from the destruction event, given the rock in this area and the space created between the imposing bedrock sections. Providing some evidence, the upper levels of the excavation, above the hearth, showed a looser area of soil, filled in with large stones and specs of charcoal. Regardless, Room 3 lacked the distinct architectural features that defined Room 2's interior and the uniquely shaped walls surrounding Room 1. Room 3's relative uniformity in room dimensions and features is instrumental in reconstructing the destruction event that ended Building 1 B's occupation.

1-W Phase A

Below Building 1B is Building 1A, an earlier structure lying at roughly the same location. Given the complications created by road construction, the excavation only exposed a small part of this lower phase, and the excavations were split into two main sections, separated by a thick unexcavated balk. It included a western portion with a doorway and the corner of two walls and an eastern portion with an eastern wall. Unfortunately, the excavated areas between walls did not reach a depth to recover pottery and artifacts that would date this phase, apart from a few diagnostic examples. Thus, the architecture is the main indication of the relationship between Buildings 1A and 1B.

The connecting architectural feature between Building 1A and 1B is Wall 4. The road construction cut Wall 4 perpendicularly, revealing that slightly below the floor level of Room 2, Building 1A, the wall sits on a small layer of reddish-brown clay that divides it from a large stone slab. That slab forms the top of a lower wall running in line with Wall 4. That lower wall is part of Building 1A and is dubbed Wall 7, given its apparent

connection to the wall above. Wall 7 was ca. 60 cm wide, built using alternating courses of wide and flat rectangular slabs, interspersed with a course of stone laying mostly perpendicular to the course above. The wall was built on a surface of water-laid clay and gravel, with about seven courses of Wall 7 remaining between the floor and Wall 4 above. About 50 cm south of the southern doorjamb of Doorway 1 is the northern doorjamb of Doorway 2, part of Wall 7. The doorway's width varied from 40-50 cm wide.

Wall 7 continues further to the south, past Doorway 2. Its southern limit runs against the limit of the excavated area, where the wall turns at a right angle to the east. This southern wall, Wall 8, was a collection of irregular facing stones, 10-15 cm wide, laid against red clay, and interspersed with smaller stone splinters, different from the construction of Wall 7. This space between Walls 7 and 8 was filled with a homogenous fill of clay, with few pottery sherds, indicating a deliberate fill. Its contemporary usage, even its identity as an interior space, could not be ascertained with the constraints of the excavation. These walls of Building 1A were possibly leveled and the interior space filled to serve as a foundation for Building 1B.

A section of the roadway was left unexcavated between Building 1-W Phase A's Wall 4 and another series of walls to the east. Given the depth of excavation in this area and the lack of continuity between it and the western trench of Building 1A, the identity of the collection of stones in this area cannot be understood with precision. Describing the excavation here is difficult as well. We uncovered a mass of stones, somewhat aligned at an NW-SE orientation, with additional stones on top in no particular pattern.

The stone agglomeration's western face had a flat face, but no corresponding face could be found on the eastern side to indicate it was a wall. The western wall ran up to the outcropping of bedrock below Wall 3.

1C-W

Building 1C, the final use of the building, consisted mainly of a fine Achaemenid burial. While there is some faint evidence that squatters visited the building's destroyed remains and left minimal detritus, the building was not fully reoccupied. The burial was high above the original surface of Building 1B and approximately 20 - 30 cm below the top of Wall 1. While the elevation of the surface at the time of the burial was unknown, the bottom of the burial was only 30 cm or so from the uppermost remnants of the collapsed building below. The team did not note any significant difference in the soil around the body, suggesting that its original position was not far below the surface. For a deep grave, one expects a deep trench with infill that would differ from the surrounding soil. The body lay approximately E-W, in line with the angle of Wall 1, with its head facing west and its feet near the corner of Walls 1 and 3. This positioning, entirely within the upper courses of the remaining wall, suggests that the area’s residents were aware of the structure at the time of the burial.

Our team’s osteoarcheologist did not evaluate the skeleton, but we believed it to be a woman, possibly elderly. While the surrounding moist soil heavily degraded the bones, the articulated skeleton had both arms resting on her chest. The skeleton measured 40.5 cm long from the top of the femur to the feet. The left arm was bent at 90 degrees, resting slightly above the pelvis' top, while the right arm was curled up with the hand

near the skull. On the body were several ornate grave goods, including a bracelet, a fibula, ring, earrings, a pin, as well as many beads, discussed in depth in the subsequent Finds section. Directly next to the body were two small jars with narrow necks (Plate 17.2, 17.3), but their rims were, unfortunately, missing, preventing more specific dating or analysis of their characteristics. Overall, the assemblage best corresponds to the Achaemenid Period, most clearly indicated by the fibula. The richness of the grave goods, with ornate metal designs and collections of rare and uncommon stones used to create beads, makes the burial's location all the more notable. The burial was likely somewhat contemporary to another site excavated by RAP, Ghabrestan-i Topzawa, discussed later in this chapter. That tomb lacked the Gund-i Topzawa burial's fine goods but had a far more elaborate and deliberate tomb construction. It is worth considering how the sites different locations in the Sidekan area and manner of inhumations led to the difference in associated burial goods.

Building 1-W Phase B: Reconstruction and Destruction

Before beginning an attempt to reconstruct the layout and use of Building 1B in antiquity, it is worth beginning with a quote from Edmund R. Leach, an ethnographer who visited the Rowanduz area in 1938. He largely followed Hamilton's newly built road from Shaqlawa up to the town of Rayat, near the Iranian border. His account of the Kurds noted their culture, politics, and economic activities. Notably, he described a typical house in the area in detail. His description of the Kurdish homes of the Rowanduz area is reproduced below, with emphasis added in sections that have particular relevance to Gund-i Topzawa:

The shape is rectangular but there is no consistency in size or plan. As a rule, the *main door faces downhill* and leads out on to the roof of the house immediately below, but this practice varies. *The walls are usually of rough-cut stone set in a mud plaster about two-foot-thick*, but the modern tendency is to substitute sun-dried mudbrick for the stone and plaster. *Stone houses are two stories high, but this is rather unusual; in such cases the upper story is reached by an outside ladder*. All rooms have windows in the outside wall but, except in the Agha's houses, there are very rarely any shutters. *The fire is set in a small floor pit, there is sometimes a proper smoke vent in the roof but more usually the only escape for smoke is through the window. The roof is flat, sloping downwards slightly towards the front, the main roof beams run horizontally, parallel to the hill contours, while over them is laid a thick layer of thin branches about the thickness of peasticks.* This is given a top dressing several inches thick of a slurry made from lime, ashes and rubble. In dry weather this sets hard and provides a perfectly rigid floor, but it is not true cement. Under rain, it quickly goes soft and must be kept constantly rolled if leaks are to be avoided… It may be mentioned that the most valuable parts of the house are the roof beams. *Straight baulks of timber of adequate length are hard to obtain,* and only Aghas can afford anything really substantial. *If for any reason a peasant decides to build a new house, he dismantles the roof of his old one and uses the materials for his new house.* A village site that has been abandoned thus reverts almost immediately to common scrub (Leach 1940, 49).

This description of a typical Sorani Kurdish house in the 1940s is useful as a reference when reconstructing GT Building 1B, comparing the structures' similarities and differences. Ethnographies can be helpful signposts for understanding pre-modern structures, but there are certain aspects we expect to change over the millennia. Even across seemingly close distances in the same periods are differences. In Kramer's ethnography of Aliabad, only a few decades after Leach made his observations, the houses were built primarily of mudbrick on a stone foundation but shared the same tendency to remove the roofing beams when building a new home at a different location (1982, 90–94). Understanding the destruction event and its stratigraphic evidence provides a needed foundational understanding of the standing structure before the conflagration. That knowledge allows a rough estimation of each room's form and function in Gund-i Topzawa Building 1B. The archaeological remnants of features in

rooms can often provide clues to their original function, despite residents' insistence of continually altering the primary function (Kramer 1982, 97).

The destruction event that ended Building 1B's occupation preserved many of the inhabitants' objects and provided insights into the building's upper floor, lost to time. Figure 4.9 displays the parallel west-facing sections of Rooms 2 and 3. The two sections' similar stratigraphic sequences reveal the progression of the building's destruction. Room 3's section was preserved to support the partially collapsing Wall 4 and includes upper layers that were removed at the time of Room 2 section's drawing but was not excavated to the same depth as Room 2. Notably, Room 2's section covers the portion of the room covering the two eastern pithoi discussed above, resulting in slightly varied stratigraphy than that in Room 3. In addition, Room 2's south-facing section, depicted in Figure 4.10, provides an alternative angle to the Room 2 stratigraphy in Figure 4.9. Its larger recorded area also reveals how the room's platform affected the deposition of materials during the destruction event. Table 3 provides the list of stratigraphic layers in the two rooms three sections and their respective matrix consistency. Room 3, absent the complications of stratigraphy caused by Room 2's platform, is the preferred location to discuss the phases of destruction.

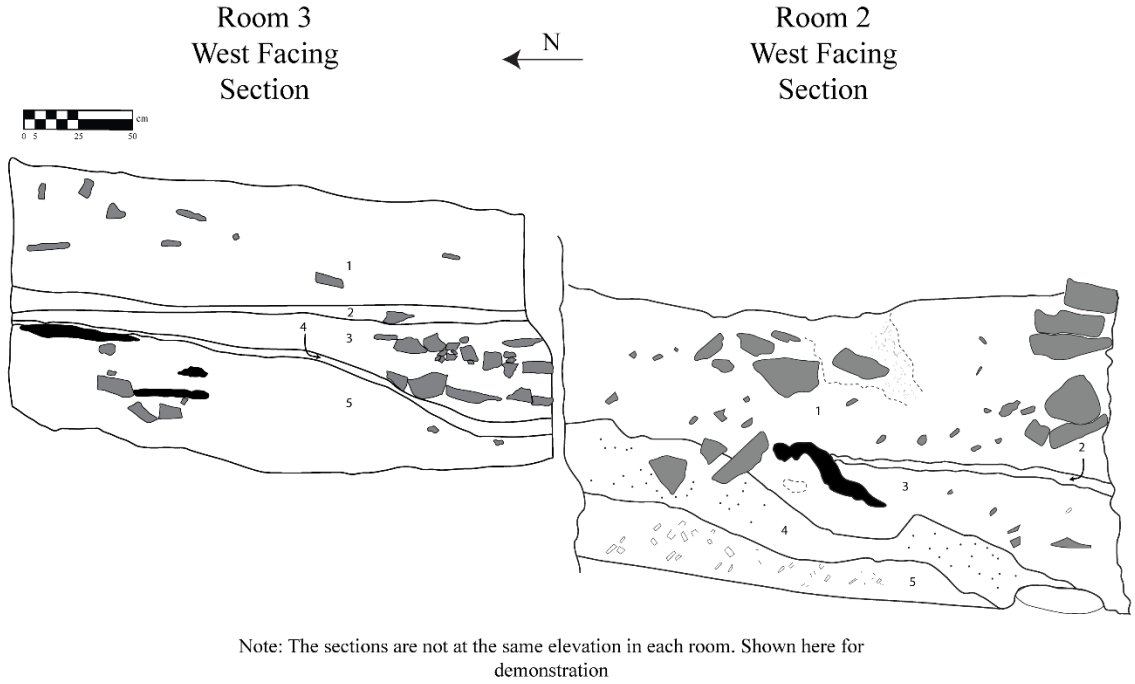


Figure 4.9: Gund-i Topzawa Building 1-W Phase B Stratigraphy Comparison, West-Facing Sections

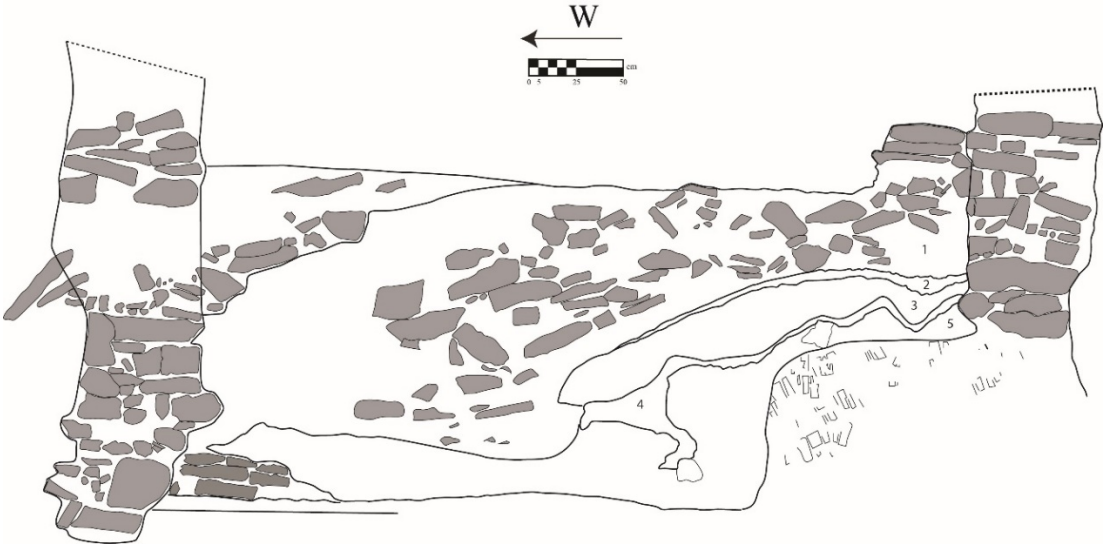


Figure 4.10: Room 2 South Facing Section

Room 3 (Figure 4.9.R3) was not entirely excavated to the floor level of the building's destruction. Rather, there was approximately 10 cm between that floor, visible in the north-facing section (not drawn), and the room's exposed limits. Layer 5 in the section drawing, the lowest level, abutted the floor but represented one stratigraphic event after the floor's sealing. Layer 5 had a high proportion of ash and charcoal along with medium-sized building stones. Sloping southwards, the layer was as thick as 40 cm in the northern rear of the room, narrowing to only 10 cm at its southern edge. The bottom of Layer 5 was delimited by a charcoal line, with additional inclusions noted in the section. Layer 4, a compact (5 – 10 cm) yellowish-red layer of baked sandy clay, also sloped downwards to the south. Above, Layer 3's soil matrix was similar to Layer 5 but lacked the charcoal lenses and contained large to medium-sized stones from the wall collapse. The lower level of Layer 3 sloped downwards with Layer 4, but its top was mostly level. As a result, the northern extent was less than 5 cm thick, while the south was as thick as 50 cm and full of large stone collapse. Layer 2 was a "sealing" phase over the lower levels. The level's matrix was compact yellow-red clay, surface-like, with a few specs of charcoal inclusions, many small stone chips, and small sherds laying flat or embedded in the layer. Notably, this layer is roughly level, with a drop of less than 5 cm between the north and south of the room. Its flat surface suggests that this material was deposited after the lower destruction material settled. The ceramic sherds would indicate the layer served as a surface for a small or short-lived squatter occupation. The top level of the section, Layer 1, was at least 60 cm thick, consisting of sandy clay with a high proportion of small stone chips and larger stone blocks typical of the surrounding walls.

Table 3: Connection between Layers in Building 1-W Phase B, Rooms 2 and 3

Description	Room 2, West-Facing Section	Room 2, South-Facing Section	Room 3, West-Facing Section	Matrix – Room 2
Later Wall & Hillside debris (Post-roof collapse)	1	1	3	Brown sandy clay, charcoal intermixed, large stone collapse
Burned & hardened roof material	2	2	4	Hardened yellowish-red sandy clay
Collapse (below roof)	3	3	5	Compact clay, small stone inclusions, small to medium-sized charcoal
Burned roof or floor beams	4	4	5	Dense charcoal burning
Collapse material, above surface	5	5		Brown matrix, small stones mixed in

The west-facing section in Room 2 (4.9.R2) parallels Room 3's section (4.9.R2). While they are not at the same elevation, the shared patterns provide indications of the rooms' similarities and differences. This section hid the two *in situ* pithoi from the platform, the knowledge of which explains some of the irregular phases. At the lowest level was Layer 5, the surface of the platform. It was a brown matrix, with small stones mixed, and its top slopes downwards at a moderate angle. Covering the layer was Layer 4, a 30 cm thick, dense matrix of charcoal from burning. It sloped downwards as well, with its southern end coming to a point at a large stone in the section. While the section drawing does not indicate the layer above, Layer 3, was distinct from Layer 1, the

difference in matrix consistency, parallel deposition visible in Room 3, later observed irregularities in deposition over the covered pithoi, and the intrusive Layer 2 support the existence of a separate layer. Layer 3 consisted of compact clay, with small stone inclusions as well as small-to-medium charcoal lenses intermixed.

Layer 2 divided layers 1 and 3 in Room 2 (Figure 4.9.R2) and provides the strongest link between the stratigraphic sequences of Rooms 2 and 3. Layer 2 consisted of a reddish-yellow burnt clay, with small stone inclusions embedded in the matrix. Although the preserved portion of Layer 2 in the section appears level, like that of Layer 2 in Room 3 (Figure 4.9.R3), the alternative angle of the section and the building collapse in the layer above suggests that this level equates to Room 3's Layer 4. The burnt clay in both rooms is likely the fire-hardened mud or "slurry made from lime" that Leach (1940, 49) noted covered the roofs of similar houses. Further, the large charcoal lens depicted in Room 2's west-facing section (Figure 4.9.R2), at the northern edge of Layer 2, was likely a large roofing beam from the structure, burning hot as the roof's material congealed. The top portion of the drawn section, Layer 1, consisted of brown sandy clay, with small bits of charcoal intermixed with large stone collapse from the surrounding walls.

Room 2's south-facing section (Figure 4.10) can help better elucidate the relationship between these layers and the reasons for the lower material's southern slope. The south-facing Room 2 section was drawn at an earlier point in the excavations, but Room 2's west-facing section (Figure 4.9.R2) corresponds to the east portion of Figure 4.10 that rises approximately 40 cm above the surface to the west. This effectively presents a three-dimensional view of the corner of Room 2. The numbering of the layers

in Figure 4.10 equates to the layers in Figure 4.9.R2 despite the different stratigraphic pattern in Room 2's west. Layer 5, wedged between the collapse above and bedrock below, consisted of a brown soil matrix with moderate inclusions. The two storage pithoi in the room's northeastern corner rest on this bedrock, which the section reveals is the cause of the dramatically sloped material to the west. Layer 4 was largely charcoal, thick in parts. The alternative perspective shows that the southern slope in Figure 4.9.R2, Layer 4, was actually a sloping southwestern layer, filling the lower levels below the bedrock platform.

Layer 3 was composed of compact clay with small stone inclusions and small to moderately sized charcoal concentrations mixed into the matrix. Layer 2 was the layer of reddish-yellow burnt clay with small stone inclusions, connecting the alternative perspective of Room 2 and Room 3's Layer 4. Like the lower layers, the level significantly dips as it moves west, contrasting the seemingly level perspective of the west-facing section (Figure 4.9.R2). Layer 1 shows the amount that the levels "fell" to the west with its large stones from the wall collapse tumbling to the lower levels. The layer's consistency was sandy clay with small to medium-sized charcoal. The combination of stratigraphic perspectives demonstrates the sequence of the building's collapse, with gravity encouraging a southwest fall into the lowest portions of the building. Given the hillside's slope and the eastern bedrock outcropping, this may be primarily a result of the surrounding topography.

Combining the multiple angles reconstructs the destruction event in the upper, non-preserved levels of Building 1B (Table 3). Room 3's Layer 2, the so-called sealing

layer, possibly corresponded to the top of the depicted section in Room 2 (not drawn). The hardened clay was likely a result of sun drying rather than desiccation from the fire's residual heat. Layer 3 in Room 3 and Layer 1 in Room 2 was the collapse of the building's walls relatively soon after the main destruction event, with the small quantity of charcoal indicating that the fire was largely smothered by this collapse. The fire-hardened roof clay of Room 2's Layer 2 and Room 3's Layer 4 sloped towards the hillside's southern slope and covered the bulk of the building's material. Below the roof, Room 2's Layer 3 and Room 3's Layer 5 likely contained the bulk of the material on the building's probable second story that was covered by the collapsed roof. Regarding a second story, Room 3 does not clearly show evidence of a second story, but given the excavation did not reach the entirety of the floor and the documentation of likely beam emplacements in the wall, a second story likely extended over the entirety of Rooms 2 and 3. Room 3's Layer 5 was a mixture of compact clay and dense charcoal that was differentiated into two layers in Room 2. The collapse material above the floor, Room 2's Layer 5, included significant amounts of artifacts, suggesting it was part of the interior of the house before destruction.

Room 1's stratigraphy, while not depicted easily in a section drawing, consisted of a large charcoal burning layer, sealed by a thin clay layer. The charcoal layer fell directly upon the *in situ* pithoi below, confirming it originated from the roof or ceiling above Room 1. Unlike Rooms 2 and 3, however, there is no intermediate layer of mixed stone collapse between the charcoal and clay sealing layer. Room 1's charcoal lies directly adjacent to the clay layer. That suggests that while Room 1 was roofed like the

two proximate rooms, it did not have a second story. An interpretation of a single-story roofed spaced here corresponds with the room's size and somewhat unique shape.

The knowledge of the destruction event and the building's second story leads to a partial reconstruction of Building 1B's use and function. Interpreting its use helps elucidate the Iron Age inhabitants' behaviors and provides insights into the density and organization of population in the Topzawa Valley system. The content of each room reveals additional details about the purpose of each space and aids in the overall reconstruction of the building.

Room 1's overall layout was established above – a triangular room with two or three large pithoi, a fragment of a *tannur*, the base of a small plaster oven feature, and the box niche at the intersection of Walls 1 and 2. While the *tannur* and plaster oven indicates cooking in the space, reconstructing the overall use of Room 1 requires discussing the niche's original purpose and how it relates to the room overall. The niche was likely constructed for one of two possibilities: a chimney or a storage nook.

A chimney presents an intriguing possibility, given the large quantities of charcoal and ash in the room. Most of this burning was caused by the destruction event, but the small southwestern hearth-like feature suggests there was at least some fire in the room during the occupation period. That hearth was far closer to the southern portion of the room, away from the niche. The southern portion of the room was destroyed during the road construction, and thus the existence of any southern wall to enclose the area is in doubt. Additionally, Leach's description of Rowanduz Kurdish house notes that the

rooms did not have chimneys but rather let the smoke exhaust through windows, further eliminating the possibility the feature at Gund-i Topzawa served as a chimney.

The alternative explanation is the simplest – this box was merely a small box to store goods. As noted in the previous section, the excavation did not recover any objects from the niche. However, objects stored in niches like this are unlikely to be items that preserve well in the archaeological record. From ethnographic research, specifically in the Central Zagros of Central Iran, Kramer noted houses with many niches of similar dimensions that stored items like photographs, personal mementos, serving trays, or other everyday items. In many instances, families covered these niches with a decorative cloth hanging, a material that would not preserve in the archaeological record (Kramer 1982, 101). This is the most likely use of this niche by the inhabitants of Building 1-W Phase B. However, the box may not be contemporary with this phase. The excavators noted during clearing out the upper extent of Room 1 that the box may be intrusive to the structure's walls, raising the possibility it was built by squatters or an addition to the outer wall during the construction of Room 1.

Pulling together information from the stratigraphy, architecture, pottery vessel types, and archaeobotany provides an interpretation of the function of Room 1 at the time of its destruction in the Iron Age. Room 1 contained at least two storage pithoi, a hearth feature in the room's south, a moderate amount of cereal grains, a large number of grape seeds or skins, and was roofed likely with some combination of wood, branches, mud, and various flora. The vessels recovered in the room are disproportionately from bowls. Together, it appears the purpose of this room was multi-functional – a location in the

lower level of the building for cooking and storing foodstuffs. Most of the space was reserved for storage or cooking activities. The absence of a second story removes the possibility that these bowls fell with collapse from an upper story reserved for eating and drinking. Further evidence of this space as a joint storage and cooking space is a single lid (Plate 43.1), likely for cooking.

The primary feature of Room 2 was the large bedrock platform with its two clay features of uncertain function and two pithoi. Initially, the team believed these features to be ovens primarily due to their size and the thick clay walls. A more likely interpretation, however, is as storage bins. Carol Kramer's ethnographic research of the pseudonymous site of "Aliabad" in 1975 provides invaluable data on home construction and utilization and includes a description of the various storage methodologies, including clay bins (Kramer 1982). Aliabad was a town of approximately 400 residents located somewhere in the piedmont of the Zagros Mountains of Iran, at an unknown location in either the Hamadan or Kermanshah provinces (Kramer 1982, 10). Although these houses were located in a slightly different environment and constructed primarily of mudbrick, as opposed to stone, the rooms' function was comparable.

Storage bins in the houses of Aliabad were essential features of the structures, vital for keeping agricultural stores dry and safe during long and brutal winters. Many houses had storerooms with the exclusive purpose of long-term agricultural storage and would often block the door for years at a time to protect the stored food (Kramer 1982, 105). In many of these residential complexes, separate storage buildings contained these storerooms. Grain storage was in either deep holes (~1.5m), covered with clay or a lid, or

in clay bins that residents filled with flour in September, at the end of the harvesting season (Kramer 1982, 33). The residents constructed bins in a few different methods: as large cylindrical *chineh* (packed mud), with small feet; cylinders propped up with a cluster of small stones; or cubic shaped boxes. Their tops were either open with a wooden board covering or enclosed by a clay "plug" (Kramer 1982:100). They used their bins for 5 – 20 years before being replaced or rebuilt. In most cases, the bins' base had a small hole to access the contents.

Room 2's two clay features most closely resemble the appearance and function of flour or grain storage bins, given their material, positioning, and room location. For one, the hardened clay construction of the bins was ideally suited for dry material storage. The clay features at Gund-i Topzawa were seemingly dried *in situ* with possible additional hardening during the fire that destroyed the structure. With force applied, the clay quickly crumbled. This type of packed and dried clay is similar to what Kramer observed in the bins of Aliabad. In addition, the thick unfired clay features in Room 2 had few other possible uses. Its solubility prevents any liquid storage or liquid production, like wine pressing. An oven is theoretically possible with this clay material, but multiple factors refute that use. The size of the features would be uncommonly large for ovens, a close examination of the bin's section suggests the original feature had no top, and the charcoal in the floor and center of the bins resembles the detritus from collapse rather than multiple subsequent cooking events.

Secondly, the bins' position on top of the stone platform was well suited for storage bins. Separating the bottom of the bins from soil, either using small feet or a stone

base, was an important detail observed by Kramer, as penetration by moisture or burrowing animals was calamitous for food storage (Kramer 1982, 33). With the mass of uninterrupted stone directly below and surrounding the bins, the stone guarded against fossorial fauna or soil seepage. Third, the bins' higher elevation above the occupation floor of Room 2 would be well suited for access from below, perhaps through a small hole in the bins described by Kramer. Other *chineh* from Aliabad were open on their top with a wooden cover to protect against the elements (Kramer 1982, 34). Our excavations did not observe a hole in the sides of either bin, and given the clay features had no preserved top as seen in the section, wood or a similar covering would be a likely tool to enclose and access the interior. As noted above, the sectioned bin's preserved wall height was between 26 – 40 cm and it measured approximately 1 m in diameter. An estimate of the preserved portion volume was approximately 142 liters, and its twin feature was roughly the same size, combining to store a significant amount of goods. The bins were likely taller when originally in use, with fragments of the wall in the bins' interior suggesting additional height. The interpretation of these features as storage bins helps provide an integral datapoint in the reconstruction of Gund-i Topzawa and understanding of the Sidekan Valley – the projected food storage capacity of the building.

Adding to the evidence that these clay features were storage bins were the two (possibly three) pithoi positioned on the stone platform's eastern end. Their semi-permanent placement within stones, propped up, suggests a storage use, with the entirety of the platform serving as a storage area. Apart from the existence of permanent or semi-permanent storage vessels in the area, the platform's elevation compared to the surface

below creates an easily accessible area to obtain goods. Thus, the primary purpose of the whole room was likely as storage. The remaining floor was not preserved enough to the south to give any clear clues to its use, apart from a walking surface associated with Doorway 1. While Room 2 possibly contained a cooking feature like that in Room 1, no evidence was preserved further to the south.

On the other side of the doorway, Room 3's use is far less clear. This obfuscation results from the lack of floor clearing and in part, a result of the absence of architectural or semi-permanent features uncovered during excavation. Interpretation of this room's function is primarily driven by the destruction, types of pottery vessels, and objects associated with the northwestern fire feature. The possible hearth in the northwest corner of the room could provide clues, but the available evidence provides some assistance in understanding this feature. The evidence for terming this a hearth comes, in part, from the two andirons and single terracotta stand. The word andiron is derived from the iron supports used to hold up fire logs, but the andirons of antiquity, perhaps better termed "fire stands," more often served to hold pots above the fire (Rahmstorf 2010, 273). Even as rudimentary construction, fire stands would be key components of a hearth.

The tall, legged stand was a roughly circular cylinder of fired clay with a slightly convex bottom and a clubbed top with four small prongs (Figure 4.11.1). It was 16 cm tall with a diameter of 6 cm at its widest extent. Nearby the findspot for the stand were the two andirons. One andiron (Figure 4.11.2) was fully intact, while the other was broken into two pieces. The intact andiron had two horn-like protrusions on each end, with a dip in the middle and a flat base (Figure 4.11.2). It was 16.5 cm long, 8 cm tall,

and its “horns” were about 7 cm wide. One side of the andiron also had four parallel impressions in the clay, believed to be part of a handprint. Andirons often fall into two main types, horn-like projections or horseshoe-shaped (Smogorzewska 2004, 152). Despite the peaked “horns” of this andiron, its overall structure resembles a horseshoe. The other andiron was split down its middle, with only one of the presumably two peaked horns remaining. These two andirons, with their parallel dips, would likely support a pot with a fire below. The stand’s use in relation to the fireplace is unclear. Even with its small prongs, its top's limited surface area would serve as inadequate support for any pot wider than a few cm. The stand may have been supported by additional tools unpreserved in the archaeological record or unrecovered during the excavation. The collection of objects does suggest the existence of a hearth in this corner.

The distribution of vessel types in the room had an abnormally high percentage of holemouth jars. Room 1 and Room 2 had 22.22% and 27.88% of their diagnostic sherd assemblage from holemouth jars, while Room 3 almost doubles that proportion, with 52.17%. Further, when attempting to segment the pottery from the upper (Layers 1-2) and lower stories (Layers 2-5), the prevalence of holemouth jars in Room 3 is even more pronounced. In the upper phases, holemouth jars make up 37% of the total, more in line with Rooms 1 and 2’s proportion. In the lower phases, the best representation of the material from Room 3’s final occupation, the percentage of holemouth jars in the diagnostic sherds is 62%. In addition, several sherds from these phases are unidentifiable but have characteristics that may originate from holemouth jars. The holemouth pots

range from moderately sized, around 15 to 20 cm, to a few large samples with diameters 50 cm or greater.

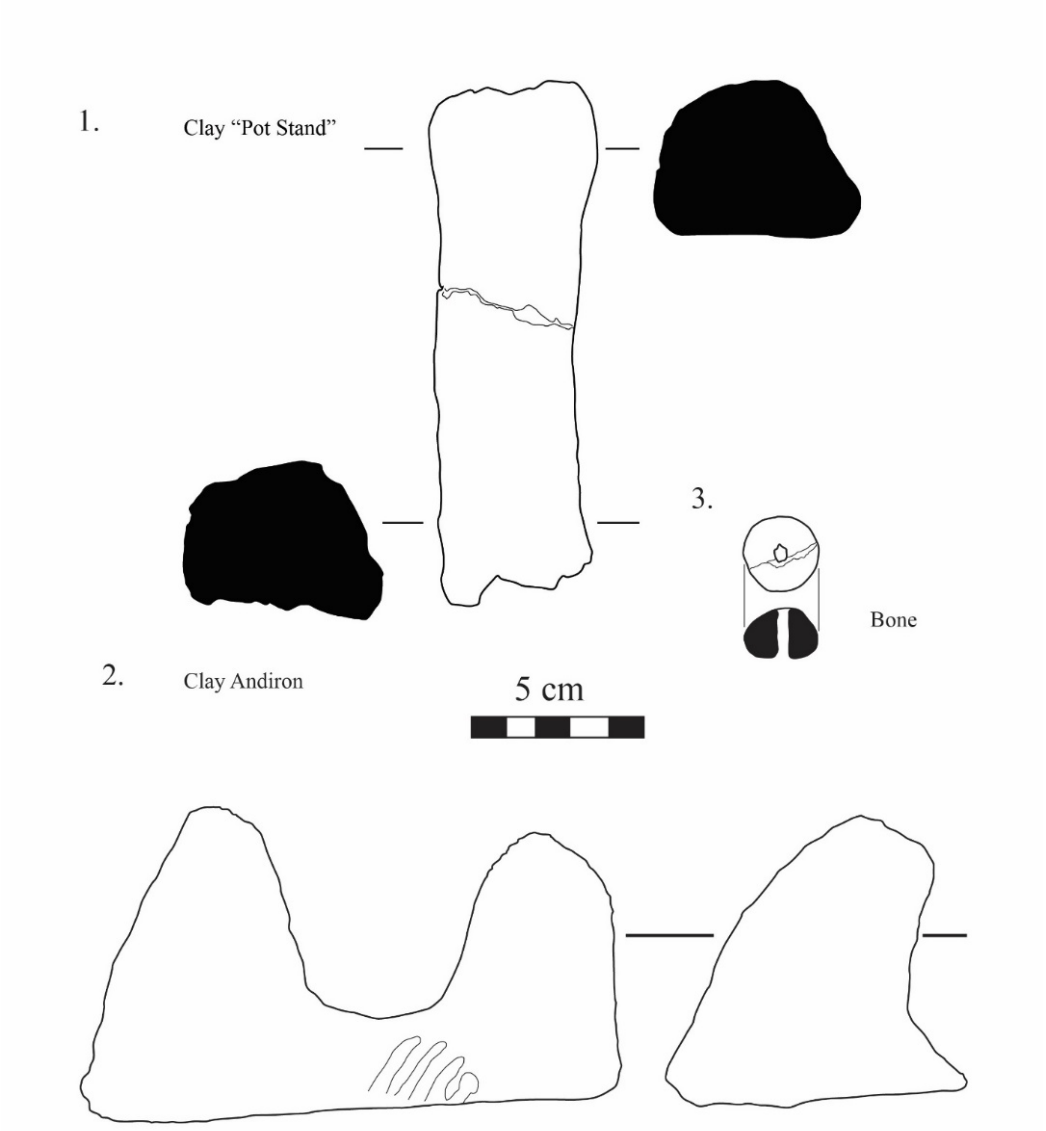


Figure 4.11: Gund-i Topzawa Building 1-W Phase B, Room 3 Objects

Holemouth jars are often associated with domestic activities, such as cooking or storage, depending on their size and fabric (Danti 2013; Frank 2019, 93). Cooking vessels have a distinctive ware, typically thick and coarse to stand up to high heat, while many

storage holemouth jars maintain a small enough rim diameter to hold in their contents. Room 3's holemouth jars mostly lack the distinct cooking ware type, but most share the coarse characteristic of cooking ware. Comparable vessel forms (see: Danti 2013 – HM 2a) are used as storage. There was little direct evidence these holemouth jars were used primarily as cooking vessels except for the probable hearth nearby. Kramer notes that in the houses of Aliabad, the residents often blocked off their storeroom doors with stone or clay (Kramer 1982, 106). Doorway 1, while it was not blocked off during the destruction event, could have served as that barricade if the residents of Gund-i Topzawa exhibited similar behavior to the Aliabad residents. Even if some of the jars were used for cooking, there is little chance the entire assemblage served that function. Alternatively, Room 3 may have served as a domestic processing location in addition to storage. Richard Zettler proposed the small stub of Wall 6 in Room 3 surrounded a small area for larding (Personal Communication). While I interpret the wall as a structural feature, if it served as a space for larding or similar activities, the numerous holemouth jars would be used to store the processed output.

Unfortunately, even with the improved stratigraphic control in Room 3, pottery distribution in the upper phases does little to provide clues to the types of activities in the upper story. However, ethnographies show reasonably consistently that rooms in the upper stories were used primarily as living rooms. Leach's description aligns with that, and Kramer notes that when there is a single room in the second story, that room is always used as a living room (1940; 1982). If there were multiple rooms, secondary rooms often served as storage for lighter goods, Watson dubbing these as "utility rooms"

(Watson 1979). The space above Room 3 may have served as a utility room or a living room. Regardless, the second story, spanning Rooms 2 and 3, undoubtedly served as the main occupation space, with additional space for sleeping on the building's roof.

Buildings 1-E & 2-E: Architecture & Stratigraphy

At the eastern edge of Gund-i Topzawa were two buildings, briefly excavated by our team – Buildings 1-E and 2-E. While neither building was excavated sufficiently to understand the stratigraphy in detail, carbon samples from the 2013 section cleaning and 2014 excavation establish these buildings as predating Building 1-W Phase B. We uncovered scant information about the buildings' arrangement and contents during excavation – the most pertinent data for the overall understanding of the site were the carbon dates. While they are discussed as two separate buildings, their exact relationship is unclear.

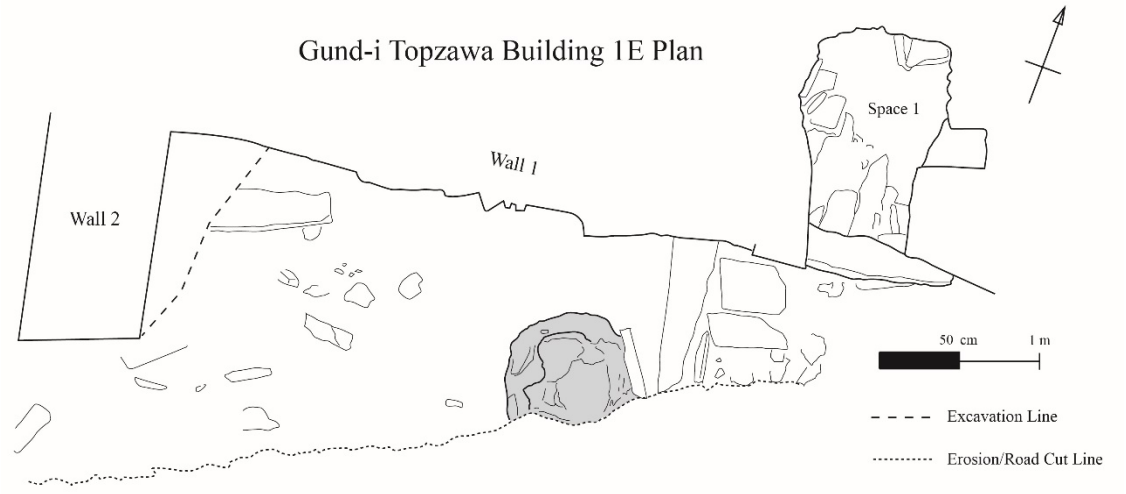


Figure 4.12: Plan of Building 1-E

Building 1-E's excavated area includes Wall 1 – its northern wall cut into the hillside like Building 1-W Phase B's Wall 1 – Wall 2 in the west, and a mostly open

space bounded by those walls. Of particular interest was Space 1, a sizeable enclosed alcove built into Wall 1. Walls 1 and 2 used the same construction methods as Building 1-W Phase B, alternating between large horizontal slabs and small perpendicular pieces on each level. Wall 1 ran about 4 m from its western connection at Wall 2 to the limits of the excavation in the east, where the earth mover's damage knocked the remnants of the wall away. We did not determine Wall 1's width, but clearing the upper section revealed a portion of another wall back to the north, showing a rebuild or second level resting on the wall. The height from the surface to the top of Wall 1, where the additional wall rests, was about 70 cm. Wall 2 ran up against Wall 1 but did not appear to join. It was approximately 70 cm wide, and its southern extent was cut and destroyed by the road construction to the south.

Figure 4.13: Interior of Building 1E, Space 1

Space 1, ambiguously named to prevent bias regarding its uncertain use, had an opening facing south. Its opening was constructed with a flat door jamb-like stone threshold, two large slabs angled slightly inwards, and a slab on its top, spanning the vertical supports. This entrance was small, roughly 50 cm by 50 cm, but allowed excavators to enter the space. Its interior construction differed significantly from the rest of the construction at Gund-i Topzawa. Instead of long, horizontally laid stones, the interior space was constructed with roughly equal-sized rectangular stone blocks, stepped inwards slightly, and roofed by large stone slabs (Figure 4.13). While we could not excavate all of the soil in the space, we established its height was less than 1 m at its deepest point and about 1 m long from its entrance to the back wall. The cleared soil consisted of a water laid matrix with stones collapsed and mixed in with the material. From the front, large stone slabs, possibly bedrock fragments, sloped downwards to the north. The upper section of the eastern wall of Space 1 contained a small niche, approximately 40 cm tall, wide, and long. The team postulated this niche served as a spot to place a lamp or other portable goods, but there were no remains in this space. Space 1's interior debris was limited. We recovered one pierced ceramic disc, small amounts of charcoal, and intermittent animal bones. The two archaeobotanical samples from this space did not contain any organic material.

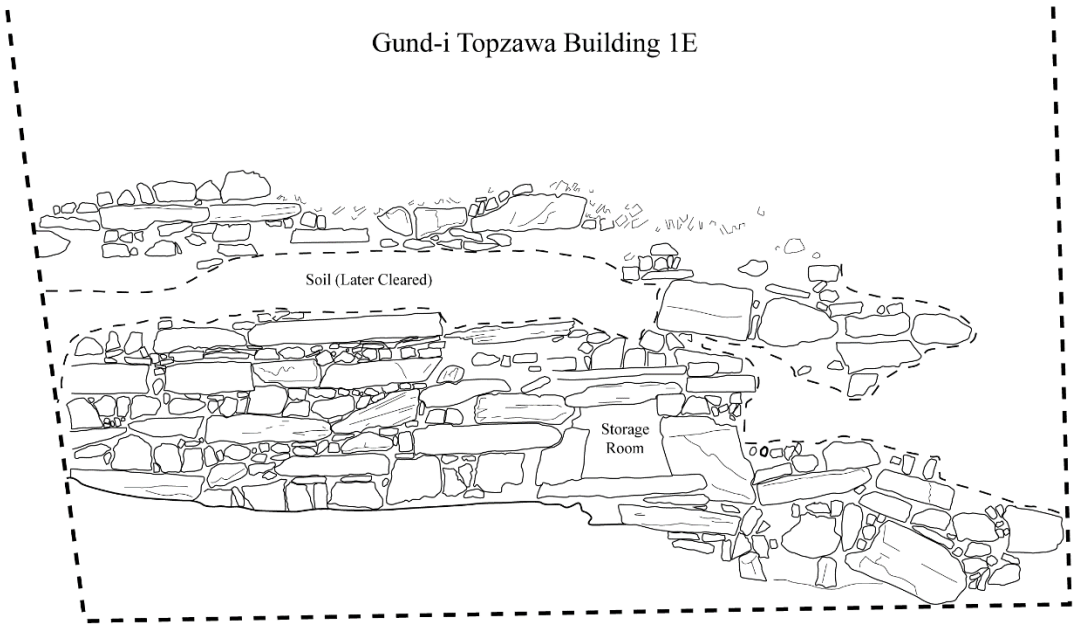


Figure 4.14: Building 1-E, South Facing Section

The main open space of Building 1-E contained some level pavement stones, a small *tannur*, ash, and minimal stone collapse. Except for the E-S pavement stone that formed Space 1's entrance, three other large pavement stones survived the destruction of the road construction. Although the area immediately in front of Space 1 was destroyed, the eastern limit of the entrance aligned with three stones, believed to be the remnants of a threshold given its orientation and flat top in alignment with the rest of the room's surface. East of the threshold was a *tannur* 44 cm in diameter. Unlike the fragments of *tannur* walls and the bins in Building 1-W Phase B, Building 1-E's *tannur* exhibits the ovens' distinctive pattern. While only preserved a few centimeters above the surface, its border was a red, hardened-clay, ceramic-like ring coated with charcoal around the inner edges. At the base of the *tannur* was plaster. The interior of the *tannur* contained three body sherds but nothing else of note. Immediately to the east of the *tannur* was a small

ash lens lying at the road cut line. Its limited size and depth likely indicate it was the location of some burning activity, probably related to the *tannur* oven. The area's surface consisted of brownish-gray compact dirt with red clay and pebble inclusions. Sealing the surface was 3 cm of red clay with large stone collapse embedded in the clay and the surface below. A find of note in this space was a door socket with large and small pivot holes. Its location did not correspond to a conspicuous door location. Unlike Building 1-W Phase B (and similar to the known exposure of 1-W Phase A), Building 1E did not have the distinct charcoal layers running across the surface and collapse indicative of a mass destruction event. The carbon sample from Building 1-E originated from the west of the room and was one of the small charcoal flakes dispersed across the area.

While the open space and the existence of a *tannur* suggests this area was a courtyard, returning to Leach and Watson's ethnographies inform us that *tannurs* were more likely than not in the rooms themselves. Further, courtyards were commonly ringed by the rooms of the house. In this instance, Wall 1 could not realistically hold another room to the north, as its primary extent was built into the hillside itself. Thus, this space was likely an interior room. Its surface, reinforced with embedded pebbles, was standard paving for domestic spaces. Unlike Building 1-W Phase B, Building 1-E's residents had adequate time to clear their valuables and portable goods before complete abandonment. Their slower desertion also sheds light on the identity of Space 1. The most likely interpretation of this stone-built nook was storage. The lack of archaeobotanical remains is explained simply by the lack of conflagration that often preserves organic material. In

the enclosed space's moist soil, any agricultural stores would decay long before our excavators entered the space.

Given the weakness of Wall 2, we left an unexcavated balk in the northwestern corner of the room, obscuring the exact relationship between the two walls. Wall 1 appeared to continue past Wall 2, forming another space's rear wall, then connecting to Building 2-E. On the western side of Wall 2, at the corner between Walls 2 and 1 and mostly obscured by the remaining balk, was a small gap in Wall 1, similar to Space 1's opening. While unable to fully clear and investigate the interior of the space, the space was comparable to the structure of Space 1. The space to the west of Wall 2 had no features of note. We cleaned out its contents to the western room's surface level, but the stone rubble continued past that point. The depth of this space remains unknown. The width of the space between Wall 2 and Building 2-E was approximately 1.5 m.

Building 2-E was poorly defined, but it seems to share Wall 1 with Building 1-E. That wall runs behind Wall 2, behind the intermediate space, and against the western wall of Building 2-E. We did not clear enough rubble in front of the back, northern wall of Building 2-E to confirm the wall's existence there, however. The western limit of Building 2-E was a well-built wall, in the same style observed across Gund-i Topzawa, about 50 cm wide. From the road cut section, its foundation appeared to rest on bedrock, like the walls in Building 1-W Phase B. About 1.5 m of its height remained, but the upper limit was partially obscured. The only room of Building 2-E was 2.4 m wide. In the south, running E-W along the construction cut line, were the lower remnants of a small wall, only one or two courses wide. While most of the wall was destroyed, it delimits the

room's depth as approximately 1.5 m. We did not reach this room's surface, but there was significant stone collapse, a small number of sherds, and no charcoal burn layer like Building 1-W Phase B. The building's interpretation is primarily based on the radiocarbon sample that provides an Iron I dating, as the dearth ceramic assemblage offers few clues to either the periodization of use of the building

Radiocarbon Dating

While the excavation recovered and subsequently tested radiocarbon samples from Buildings 1-W Phase B, 1-E, and 2-E, three factors complicate dating Gund-i Topzawa Building 1-W Phase B: radiocarbon dating calibration, the Halstatt Plateau, and the old wood problem. The first problem is shared by all archaeological excavations, the calibration of the date. The basic principle of radiocarbon dating (i.e., ^{14}C Dating) is ^{14}C, the inert radioactive carbon molecule, is continuously created through the bombardment of nitrogen by solar rays and eventually becomes $^{14}CO_2$, carbon dioxide. That gas is subsequently absorbed by plants through photosynthesis, providing the building block for all living things. Once the plant dies and ceases absorbing new carbon, the remaining carbon decays, losing electrons at a known rate, with a quantifiable metric for its half-life. Based on Libby's Nobel Prize winning research, the mean accepted half-life is 5,568 years, using the carbon in the atmosphere in 1950 CE as a starting point (Libby 1955). Detecting the proportion of radiocarbon in the sample and utilizing those metrics returns a date before the present. That is the radiocarbon age estimate, x, expressed as before present (BP), along with the laboratory error, σ, expressed as $x \pm \sigma$ (Buck and Juarez 2017). However, the BP determination does not return the real calendar date because, in

part, the inaccuracies of Libby's half-life decay time, but more significantly, the proportion of radiocarbon in the atmosphere varies over time (de Vries 1958; Brock Ramsey 2017).

Using yearly tree rings and analyzing the proportion of radiocarbon in each year's tree ring, scientists constructed a calibration curve with each year's radiocarbon proportion dating back 55,000 years. Each tree ring represents one year, and as the subsequent year's ring grows, the previous ring stops absorbing carbon. Because the climatic events influence tree rings' thickness, dendrochronologists can match the rings of different trees, creating a continuous sequence across thousands of trees. Subsequent and more accurate radiocarbon calibration curves have been published as the dataset increases and improves. The accepted calibration curve for use in the Northern Hemisphere is IntCal, which began as far back as IntCal98, in 1998, up to the most recent IntCal20 (Stuiver et al. 1998; Reimer and et al. 2013; Reimer 2020). Notably, for archaeological analysis purposes, 14 cal ca BP, i.e., the Holocene, relies entirely on dendrochronology and will be less susceptible to changes with subsequent IntCal publications (Törnqvist et al. 2015). Even with the recent IntCal20 publication, calibrated dates from Gund-i Topzawa changed by less than a decade. Inputting the raw radiocarbon dates, expressed as years BP, into the calibration curve, usually done using software like OxCal, returns a date range (Bronk Ramsey 1995; 2009). Given the precision and irregularity of the calibration curve and the laboratory error from the radiocarbon's BP determination, this returns a probabilistic output of dates. The regular bell-shaped distribution of BP dates mapped alongside the irregular radiocarbon calibration curve creates statistical

probabilities of specific date ranges (Plicht and Mook 1987). The calibrated calendar date can return a narrow range for periods when the calibration curve demonstrates a regular, continuous, and steep slope. Issues arise, however, when the calibration curve flattens or exhibits irregular decay.

The second complication is the Hallstatt Plateau, a multi-century plateau in the calibration curve that makes radiocarbon dating a narrow date range nearly impossible. The curve stretches from approximately 750 BCE to 400 BCE and takes its name from the site of Hallstatt in the Austrian alps that initially helped establish the relative and absolute chronology of Iron Age Europe (James 1993; Friedrich and Hennig 1996; Nijboer et al. 2000). Even with high laboratory precision, the implication is a single date often returns a date range of multiple centuries. Under one standard deviation (i.e., "sigma," equaling 68%), the calibrated dates can easily span two centuries. Adding the additional rigor of two standard deviations (two sigmas, 95.4%) increases the range up to 350 years. By contrast, a slightly earlier date that avoids the Hallstatt Plateau, in the range of 800 – 900 BCE, can return a range of 150 years at a 95.4% confidence interval. One method used to provide more narrow calibrated dates is the so-called "wiggle-match method," which uses radiocarbon dates from known stratigraphic or dendrochronological sequences to improve the precision of the calibration (Ferguson, Huber, and Suess 1966; Jacobsson et al. 2018). While the method can improve calibration, even with as many as 50 consecutive tree rings, the resulting calibrated dates are still less accurate than periods surrounding the Hallstatt plateau. Further, the lack of stratigraphic chronological differences at Gund-i Topzawa makes that method impossible.

The final issue of radiocarbon calibration at Gund-i Topzawa is shared by many excavations – the "old wood problem" of large structural beams. As the absorption of new ^{14}C ceases when a living organism dies, when a tree is cut down, the ^{14}C in the plant is fixed to that point (Waterbolk 1971; Schiffer 1986; Kim et al. 2019). For short-lived plants, like seeds associated with food intended for immediate or seasonal consumption, this date often accurately reflects the surrounding material's date (Nolan 2012; Huckleberry and Rittenour 2014). However, substantial structural wood, such as roofing beams, was reused over decades or centuries – Leach's ethnographic account of Kurdish houses demonstrates this pattern continuing into at least the 19th century.

Radiocarbon dating is fundamentally dating non-cultural events, like the growth of tree rings and the death of cells, and archaeologists must interpret these events in the framework of the surrounding cultural activities (Dean 1978). Wood is often the only material preserved well enough for radiocarbon sampling, despite its inherent problems as a proxy for the age of human activity. Further, given the large diameter of many structural beams, the charcoal from a tree may not even include the most recent growth ring, returning an even earlier date. This old wood problem complicates the dating of destroyed buildings when the roofing charcoal is intermixed with charcoal from more secure, time-limited contexts like ovens. However, in specific periods or areas of the world, the old wood effect is less pronounced or does not exist at all. Smaller, less durable wooden beams utilized over a shorter period or the ecological conditions that accelerate the decay of wooden materials can negate much of the bias from the effect (Kim et al. 2019). Unfortunately, northeastern Iraq does not have the moist environment

that accelerates wood decay and leads to shorter utilized wood beams. In most cases, charcoal wood dating on its own can provide the *terminus post quem* for a building, as a building could not be built before the cessation of ^{14}C absorption in the wood.

Table 4: Calibrated GT Building 1-W Phase B Dates

Sample Number	Room Location	Charcoal Type	^{14}C BP	Calibrated Date - 68%	Calibrated Date - 95%
505	Room 1	Seed	2549 ± 24	792 - 596 BCE	798 - 567 BCE
649	Room 3	Wood	2530 ± 24	796 - 776 BCE	808 - 757 BCE
664	Room 3	Wood	2484 ± 21	754 - 545 BCE	769 - 539 BCE
674	Room 2	Wood	2477 ± 21	752 - 544 BCE	767 - 515 BCE
678	Room 2	Wood	2481 ± 24	753 - 544 BCE	770 - 514 BCE
1123	Room 2	Seed	2574 ± 26	798 - 772 BCE	808 - 752 BCE
1149	Room 2	Seed	2514 ± 37	776 - 552 BCE	792 - 537 BCE

While the carbon samples from GT Building 1-W Phase B have some stratigraphic distinction between the upper and lower excavation levels, analysis shows that these layers are part of the same destruction event. That prevents using radiocarbon techniques like the wiggle method or Bayesian analysis. Fortunately, the number of carbon samples from Building 1B-W, three of which were seeds, allow further refinement of the broad calibrated date ranges seen in Table 2. All samples were run at the University of Arizona's AMS Lab and are calibrated using OxCal 4.4 (Bronk Ramsey 2009). Observing the calibrated dates in Table 2, apart from the two samples with relatively narrow date ranges (649, 1123) in the early 8th century, most of the dates span the centuries flagged as problematic with the Hallstatt Plateau. Observing the probabilistic

plot of the dates (Figure 4.15) shows that sample 505 has a similar distribution to 649 and 1123, with a slightly elevated probability of originating post-8th century. Notably, 1123 and 1149 originate from the same context – the interior of the pithoi in the northeast corner of Room 2 – and are both seeds. Thus they should date to about the same year, despite 1149's much wider date distribution. The remaining samples' date ranges, however, extend over multiple centuries. One method for further refining the date of the building is the tau method.

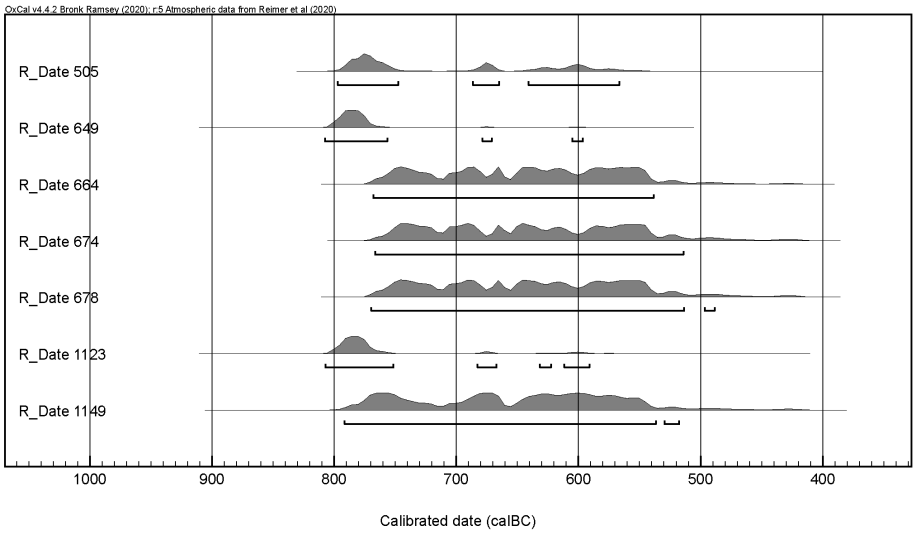


Figure 4.15: Calibrated GT Building 1-W Phase B Radiocarbon Dates

The basic principle underlying the tau method is events are arranged in an order assumed to be exponentially distributed, rising to a maximum event probability at the end event (OxCal 4.4; Garfinkel et al. 2012). As the destruction event at Gund-i Topzawa Building 1-W Phase B presumably caused the carbonization of wood and seeds at the site, the seed samples are most likely the remnants from the structure's final days. Using

that framework, the latter dates of the wood samples are decreased in probability. Running the tau provides a beginning range, "T," from 853 – 592 BCE, and an ending range, "E," from 762 – 521 BCE. As those dates do not provide any further clarity or specificity, breaking down the modeled dates can help determine a likely range for the destruction event at Gund-i Topzawa. Viewing the multi-plot of the modeled dates (Figure 4.16) shows the probabilities' concentration around the first half of the 8th century. Comparing 1123 and 1149 are particularly instructive. If we model them as a single sample (erroneously), there is a 68% probability the date falls between 800 – 750 BCE, versus the 68% probability of falling between 798 – 772 BCE for sample 1123 alone. With the tau model, sample 1149 has a 52.5% chance of falling between 789 – 716 BCE. Despite the probability of a later date, the cluster of calibrated and modeled dates clusters around the first half of the 8th century. This period corresponds to the cultural material. The excavations at Mudjesir returned a date in the 9th century, and the pottery surrounding that radiocarbon date matches the Gund-i Topzawa assemblage (Danti and Ashby Forthcoming). One consequence of an early 8th-century destruction date at Gund-i Topzawa Building 1-W Phase B is it removes the possibility that Sargon II destroyed this structure during his attack on Muṣaṣir. Based on radiocarbon probabilities, the chance of a 714 BCE destruction is less likely than a destruction date in the 5th century.

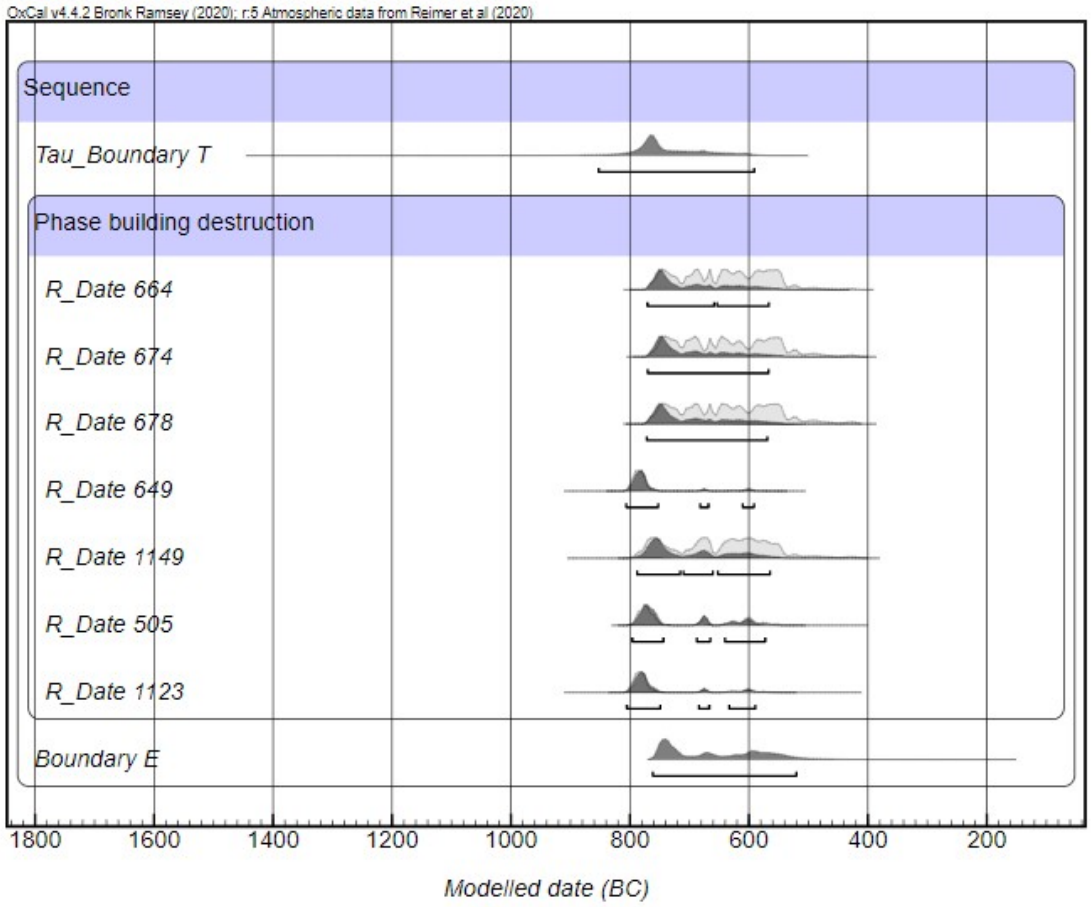


Figure 4.16: Gund-i Topzawa Building 1-W Phase B, Tau Model

The remaining radiocarbon samples from Gund-i Topzawa are far simpler to discuss as there are only three, and their BP determination avoids the additional complication caused by the Hallstatt plateau. Building 1-E's single excavated radiocarbon sample, from east of Wall 2, returned a calibrated date of 1261 – 1107 BCE, with a 90.2% probability (OxCal 4.4, Bronk Ramsey 2009, Reimer 2020). Two of the samples collected during the 2013 section cleaning seemingly originate from Buildings 1-E and 2-E, based on their positioning between exposed walls (Figure 4.1). Sample 455 may originate from the partially excavated space between Buildings 1-E and 2-E, given the walls' close location. Its date returns a two-sigma range of 1191 – 903 BCE, but with

a 93.1% probability of falling between 1128 and 903 BCE. The other sample from 2013, 453, had a calibrated two-sigma date of 996 – 814 BCE. The incongruity of the two samples related to Building 1-E may be caused by one of two reasons. One, the matching up of the 2013 sample to the 2014 excavation location was incorrect either because of a recording error in 2013 or a fault in matching shared landmarks. Alternatively, the two samples relate to the same building but are from two separate occupation phases. Given the two probability curves are effectively sequential, there is a possibility of subsequent occupation levels. The upper wall, resting on Wall 1 in Building 1-E, may have been part of a later occupation and the source of the later radiocarbon date. Despite the open questions about the radiocarbon dates from Gund-i Topzawa East, they are all earlier than the occupation at 1-W Phase B, possibly contemporary with the occupation of 1-W Phase A.

Table 5: Non-Building 1-W Phase B Gund-i Topzawa Dates

Sample Number	Location	Charcoal Type	^{14}C BP	Calibrated Date - 68%	Calibrated Date - 95%
725	1-E	Wood	2957 ± 24	1216 – 1125 BCE	1261 – 1055 BCE
455	1-E*	Wood	2850 ± 42	1102 – 930 BCE	1191 – 903 BCE
453	2-E	Wood	2751 ± 42	926 – 831 BCE	996 – 814 BCE

Finds

The finds from Gund-i Topzawa fall into two categories: the fine goods associated with the burial in 1-W Phase A and the more common goods found mainly in 1-W Phase B. Objects from Gund-i Topzawa 1-W Phase B tend to be associated with domestic activities like weaving and food processing. There was some degree of differentiation of

objects between rooms, though the rooms' overlapping object types and somewhat ambiguous use are not sufficient to use the objects as explicit proxies of room purpose.

All Room 1's objects, three clay discs, were seemingly associated with weaving production. One was pierced through the middle (1079), one was in the process of being pierced with two parallel holes partially perforating (Figure 4.17), and one was simply a clay rounded disc (1078). The rounded discs are unextraordinary, but the perforation in two suggests an association with weaving. One of the simplest types of loom weights, perforated discs, served to anchor wool threads in weighted looms (Nelson 2016). In some instances, a "perforated roundel" made from discarded ceramic sherds can also serve as spindle whorls, although Yener believes these discs are more likely loom weights (Yener 1990, 403; Keith 1998, 505–7). Spindle whorls are often hard to distinguish from beads, as they are ubiquitous and have similar forms. However, spindle whorls are differentiated in two main characteristics. Spindle whorls are almost always larger than beads but usually under 40 mm in diameter, and they have larger central perforations than those in beads to allow for the thicker wool to pass through (Liu 1978, 90–91). All three discs from Room 1 range from 3 to 5 cm in diameter; thus, their size alone would likely preclude use as spindle whorls. However, while Room 1 did not contain likely spindle whorls, Rooms 2 and 3 had likely examples.

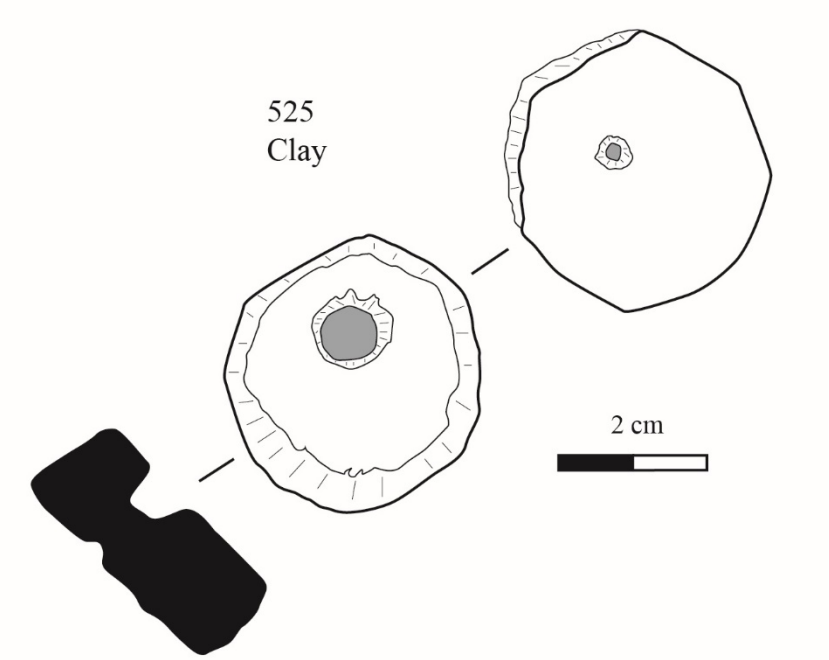


Figure 4.17: Partially Pierced Disc, GT Building 1-W Phase B Room 1

Rooms 2 and 3 contained small spindle whorls made of bone. While spindle whorls were most often made of stone, metal, or clay, bone was a moderately common material (Liu 1978, 92; Kimbrough 2006, 57). Room 2's spindle whorl (Figure 4.18.2), while partially broken, had a characteristic convex top pierced through its center. Its diameter was approximately 4 cm, and its shape was nearly identical to other bone spindle whorls at Bastam (Kroll 1979, figs. 15, 7). The shape and material alone do not provide much chronological assistance, as one of the two Bastam examples dates to the medieval phase and another to the Urartian period. The bone spindle whorl in Room 3 (Figure 4.19.2) had the same shape but slightly smaller at 3 cm. Neither spindle whorl was directly associated with other weaving tools. Room 2 also contained another pierced ceramic disc (Figure 4.18.3), with a darker and harder ware than those in Room 1.

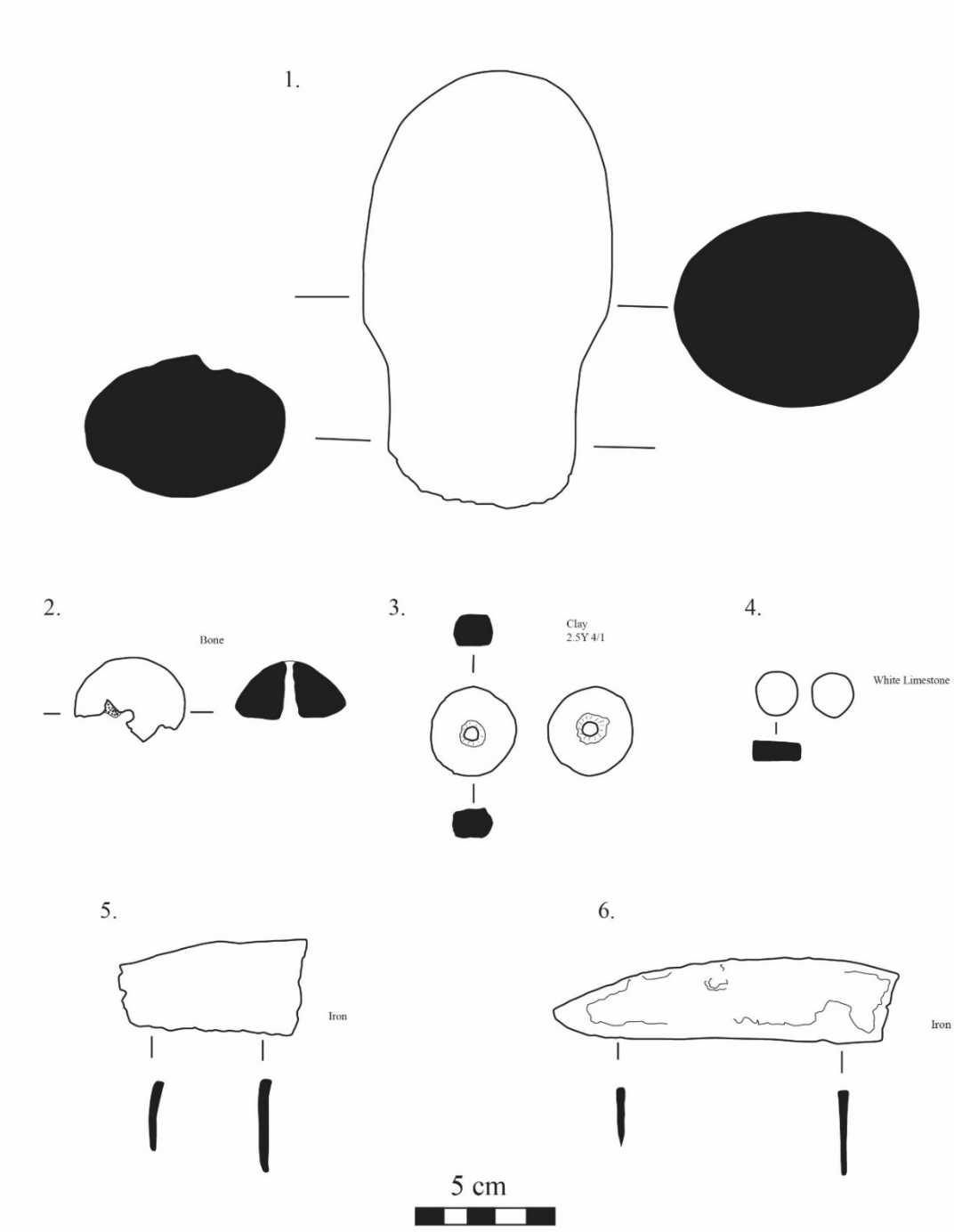


Figure 4.18: Gund-i Topzawa building 1-W Phase B, Room 2 Objects

In addition, there was another disc, unpierced and made of limestone (Figure 4.18.4). Despite its similarity to the clay discs, its unpierced center and finer material does not suggest it functioned as a loom weight. Both discs originated from an upper context, likely material from the second floor of the building. In the detritus that collapsed over the rear pithoi in Room 2 was a large stone (1140), 10 by 12 cm, with a well-drilled hole about 2.5 cm in diameter. The stone was likely a weight of some type, possibly a loom weight. Room 3 also contained a larger stone with slight hole indentations that may have also been intended as a weight.

While there was a relative paucity of weaving-related artifacts, they support the hypothesis that Building 1-W Phase B was a domestic, multi-functional space. The low quality of the whorls corresponds to local production. Even the size of the whorls is indicative of the type of weaving activity. Whorls' weights are associated with weaving different types of wool. Whorls over 150 grams are used for a coarse thread, while whorls under 8 grams are used to create a fine thread from short-staple wool (Barber 1991, 52). If Gund-i Topzawa was a settlement in the hinterlands, near sheep grazing, the inhabitants would likely be transforming the raw wool into a coarse material.

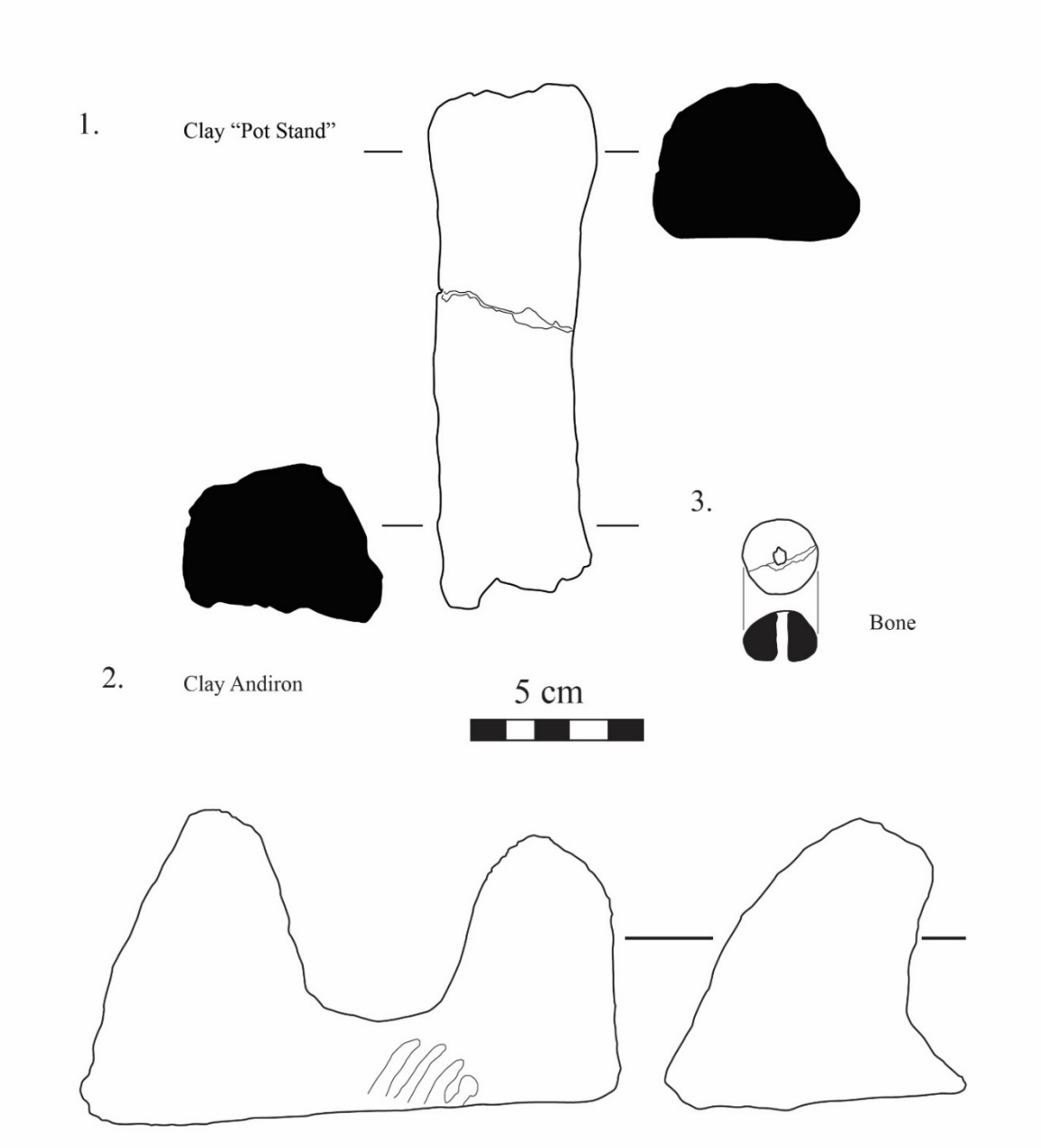


Figure 4.19: Gund-i Topzawa Building 1-W Phase B, Room 3 Objects

Along with finds associated with weaving, there were a handful of objects related to food processing. The direct examples were two pestles in Room 2 and a third in Room 3. One (Figure 4.18.1) in Room 2 was clearly identifiable as a pestle, with an enlarged and rounded top, narrowing to a smaller diameter further down the base. Its counterparts

(1312, 770) lacked customization and refinement. Those stones were simply rounded at the top. Notably, the pestles' stone was not the same variety found in the surrounding walls and across Gund-i Topzawa. While unable to examine the stones in detail, they appear to be a much harder stone than the shale in the Topzawa Valley, likely some type of igneous rock like granite. Building 1-W Phase B held no identifiable mortars. Room 3 contained a strange, worked stone with angled markings, possibly created by rope friction, and a depression possibly caused by repetitive friction from the nearby pestle. If repetitive rope motions caused the markings on the rear of the stone, that action's reasons are unclear.

Table 6: Gund-i Topzawa Building 1-W Phase B Finds

Room Number	**Bag Number**	**Drawing**	**Object**
Room 1	525	Figure 4.17	Pierced Disc
Room 1	1078	-	Ceramic Disc
Room 1	1079	-	Ceramic Disc
Room 2	561	Figure 4.18.6	Iron Blade - Sickle
Room 2	562	Figure 4.18.1	Pestle
Room 2	582	Figure 4.18.5	Iron Blade - Sickle
Room 2	583	Figure 4.18.3	Pierced Disc
Room 2	594	Figure 4.18.4	Pierced Disc
Room 2	596	Figure 4.18.2	Spindle Whorl
Room 2	1140	-	Ground Stone - Disc
Room 2	1327	Figure 4.20	Spearhead

Room 3	765	Figure 4.19.2	Terracotta andiron
Room 3	768	-	Terracotta andiron
Room 3	773	-	Terracotta andiron
Room 3	774	Figure 4.19.1	Terracotta Pot Stand
Room 3	776	Figure 4.19.3	Spindle Whorl

Two blades, located in the upper collapse of Room 2, have a possible association with food processing. One blade (Figure 4.18.6) retained its tip and 10 cm of its body, while the other blade's (Figure 4.18.5) point was destroyed. The blades' widths and structures ensure they did not originally belong to the same tool. Similar blades were recovered from Urartian sites (Lehmann-Haupt 1931, 545–47; Kroll 1979, 158). The blade's distinct shape, with one side of the blade highly curved and its opposite nearly straight, is characteristic of sickles. These blades are often found in contexts along with other agricultural instruments (Çifçi 2017, 50). While none of the other tools, like pitchforks or plows, were found at Gund-i Topzawa, wooden versions would not have survived the destruction or post-depositional processes. These sickles, along with the pestles and archaeobotanical samples, support the hypothesis that Gund-i Topzawa Building 1-W Phase B was a domestic homestead, intimately connected with the agriculture in the surrounding valley.

One object from 1-W Phase B stands out as not part of a purely domestic assemblage for the production of goods – a spearhead. The spearhead (Figure 4.20) was 22 cm long and 3 cm wide, with its socket 2 cm in diameter. It was constructed of iron

and heavily corroded, obscuring any fine details on the blade apart from a slightly raised spine. Its findspot was notable – the team recovered the spearhead, laying flat, in the lowest levels of Room 2 as part of an early morning cleaning context. None of the surrounding objects had any relation to the spear. While there is no reason to eliminate it from this study, its location directly adjacent to the road and minimal soil covering do raise doubts. Regardless, the corrosion on the blade prevents any analysis of its typological relationships with other sites or possible purposes.

Building 1C-W's major discovery, the burial, was surrounded by ornate and distinct objects that establish the individual's status and provide insights into the deceased's periodization. The goods surrounding the female skeleton included two bracelets, a fibula, ring, pin, a pair of earrings, as well as many ornate beads (Figure 4.21). The fibula and most of the beads were located near the right shoulder, a ring near the right rib cage, an armlet at the left elbow, and the pin and ring combination near the right leg. Of all the objects, the fibula's style is the most distinctive and provides the most chronologically secure connection to other sites.

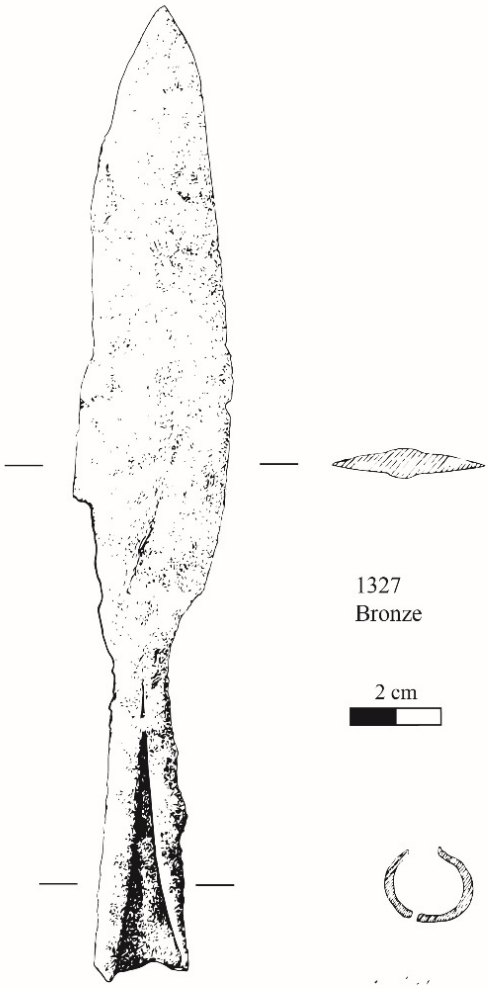


Figure 4.20: Spearhead from Building 1-W Phase B, Room 2

The fibula lay next to the skeleton's breast and was triangular with ribbing and beading (Figure 4.22.3). Each arm of the fibula was between 5 and 6 cm long, with the diameter of the ends 2 cm wide and the narrow thin connector slightly over .5 cm. A coil, 7.5 cm long, wraps along one end and spans across to the other end. The spring was broken but repaired by wrapping the longer end around the fibula's body. The opposite end had a small hand-shaped catch (not pictured) for the small wire. The beading had

faint traces of vertical scoring, but apart from the ribbing, the rest of the object was unadorned.

Table 7: Burial Objects from Gund-i Topzawa 1C

Bag Number	Drawing	Object
540	Figure 4.23.2	Earrings
546	Figure 4.22.2	Fibula
547	Figure 4.23.3	Bracelet
548	Figure 4.23.1, 4	Rings & Small Bracelet
550		Object (Beads)
554		Object (bead)
570		Object (Beads)
589	Figure 4.22.1	Pin & Ring
623		Worked stone tool
1341		Drilled stone

This type of fibula falls into Stronach's Type III 7 typology, comparable to Blinkenberg's Type XIII, 12 typology (Blinkenberg 1926, 243ff; Stronach 1959, 197–200). Stronach describes this type as "Triangular fibulae with ribbed and beaded moulding." This type often has a distinct hand-shaped clasp, a characteristic the Gund-i Topzawa fibula shares. It was the most common type of fibula in the Near East, found at sites across the ancient world from Syria and Palestine, Mesopotamia, to Persia (Stronach 1959, 198–200). The earliest attestations of this type, and any other fibula type, in

Mesopotamia and Iran, were in the late 8th century, providing a *terminus ante quem non* for any context with a fibula (Muscarella 2013, 804–7). The style became increasingly popular in the 7th century, spanning the ancient world before its design largely ceased by the end of the 5th century. A similar but unrefined version survives to the Hellenistic Period (Stronach 1959, 198; Rehm 1992, 228). Two analogous fibulas of this type, from Deve Hüyük and Ur, date to the Achaemenid Period (Woolley 1914, pl. 23J; 1962, pl. 34). In Muscarella's analysis of two different fibulas, from graves at Aššur, in Iraq, and Marlik, in Iran, he determines this type most likely dates to the 7th century (Muscarella 2013, 809–10). Given this dating, the fibula likely dates to the 7th-6th century, with the burial occurring at least some time after its production.

The other distinctive object from the burial was the straight pin and its associated ring (Figure 4.22.1). The copper-alloy pin measured 9.9 cm in length, and the ring of comparable material had a diameter of 4 cm. The rectangular profile of the pin tapered to a rounded point, but its top was squared off and crenelated. The crenelated top of the pin measured .5 cm across, while the point narrowed to .4 cm. This combination of pin and ring was common in the Achaemenid Period (Rehm 1992, 240–46). Comparable examples originate from Kamid el-Loz, Deve Hüyük, and Nippur (McCown, Haines, and Biggs 1978, pl. 60:15; Poppa 1978, pls. 7, 13, 25; Moorey 1980, fig. 16: 397-398, 405–407). Opposed to the fibula, which predated and then continued into the Achaemenid Period, this ring and pin combination begins later and continues centuries after the popularity of that fibula style wanes. That would suggest the fibula was old at the time of internment, reinforced by its broken and repaired coil, and buried with the newer pin.

Along with the fibula, pin, and ring were six other metal goods and more than 400 beads. The metal goods consisted of two small rings, two earrings, a small and large bracelet (Figure 4.23). All the metal goods were constructed from a similar copper alloy and utilized similar metallurgical techniques. The objects' metal was bent to the desired shape, likely through forging rather than casting the final shape. The earrings' shape (Figure 4.23.2) was roughly triangular with a flat rounded bottom, while the rings (Figure 4.23.1) were roughly circular, made from bending a single piece of metal. The larger bracelet (Figure 4.23.3), which may have served as an armlet given its position near the skeleton's elbow, and the smaller bracelet (Figure 4.23.4) were both circles with a small gap.

The beads were made of various materials, including carnelian, bronze, frit, bronze, limestone, and clay (Figure 4.24). A series of about 28 copper alloy beads (Figure 4.24.11), each with two small striations, were arrayed in a long strand near the neck. Another bead was located near the center of the chest and resembled a cylinder seal's shape, albeit with no decorations. The beads' placement suggests many were part of the clothing. Overall, the objects' positioning indicates a lack of post-depositional movement and reconstructs the body's final attire. The fibula served its purpose of supporting the clothing near the breast, and the long string of copper alloy beads hung off the body, holding one or two of the small rings. The bracelet was far up the arm, near the elbow, while the pin and ring were near the feet, possibly as part of the clothing. It is worth pointing out that the ornate grave goods accompanying this body were more elaborate than would be expected from the location. Further, if they were aware of the ruins of

Gund-i Topzawa, the burial location would be even prosier. Why, then, did they choose this location? Analysis of the current dataset cannot provide a definitive answer, but the following analysis of the tomb of Ghaberstan-i Topzawa demonstrates an interment of a similar period with significantly different characteristics.

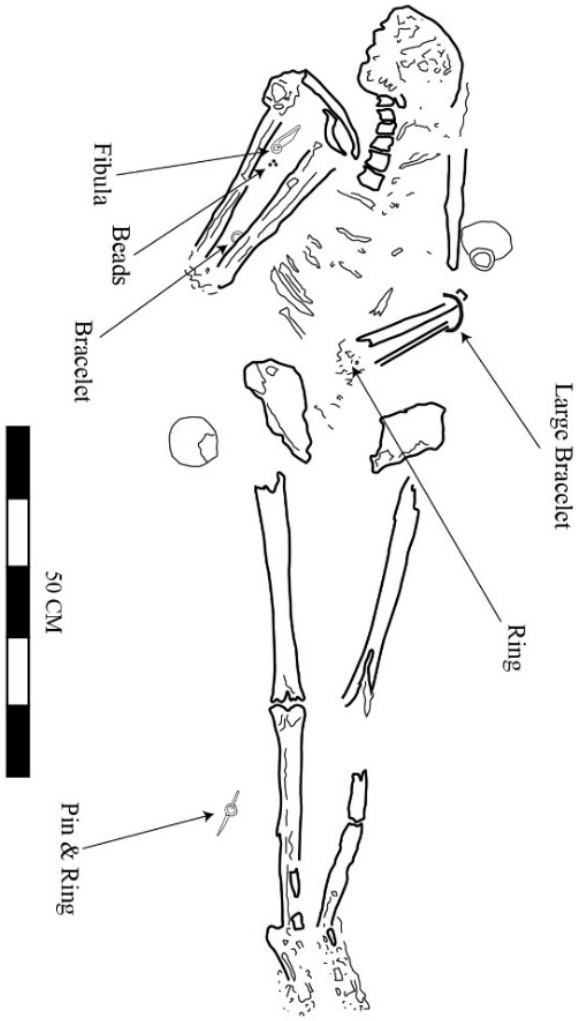


Figure 4.21: Gund-i Topzawa 1C-W Burial

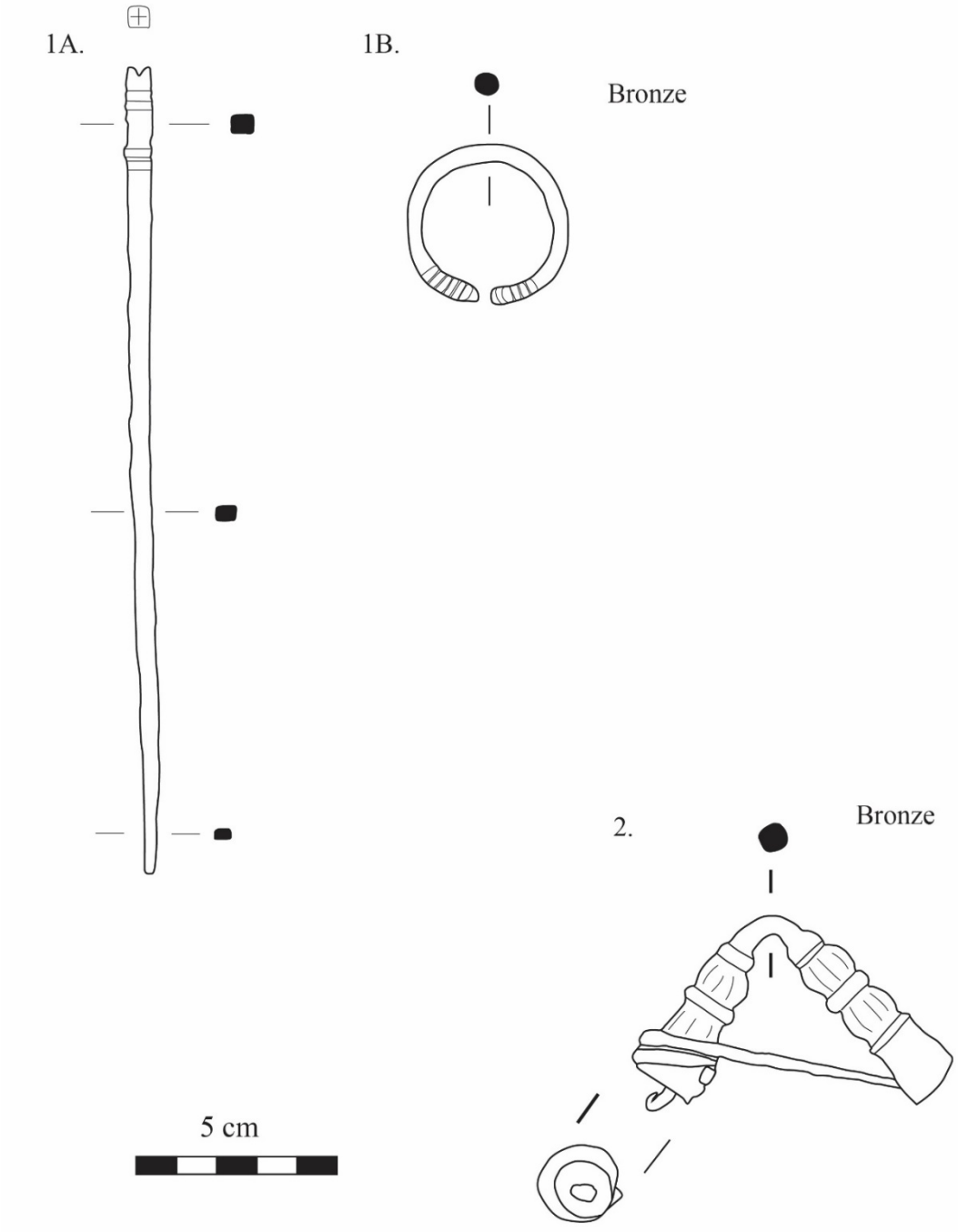


Figure 4.22: Burial Objects from Gund-i Topzawa 1C-W

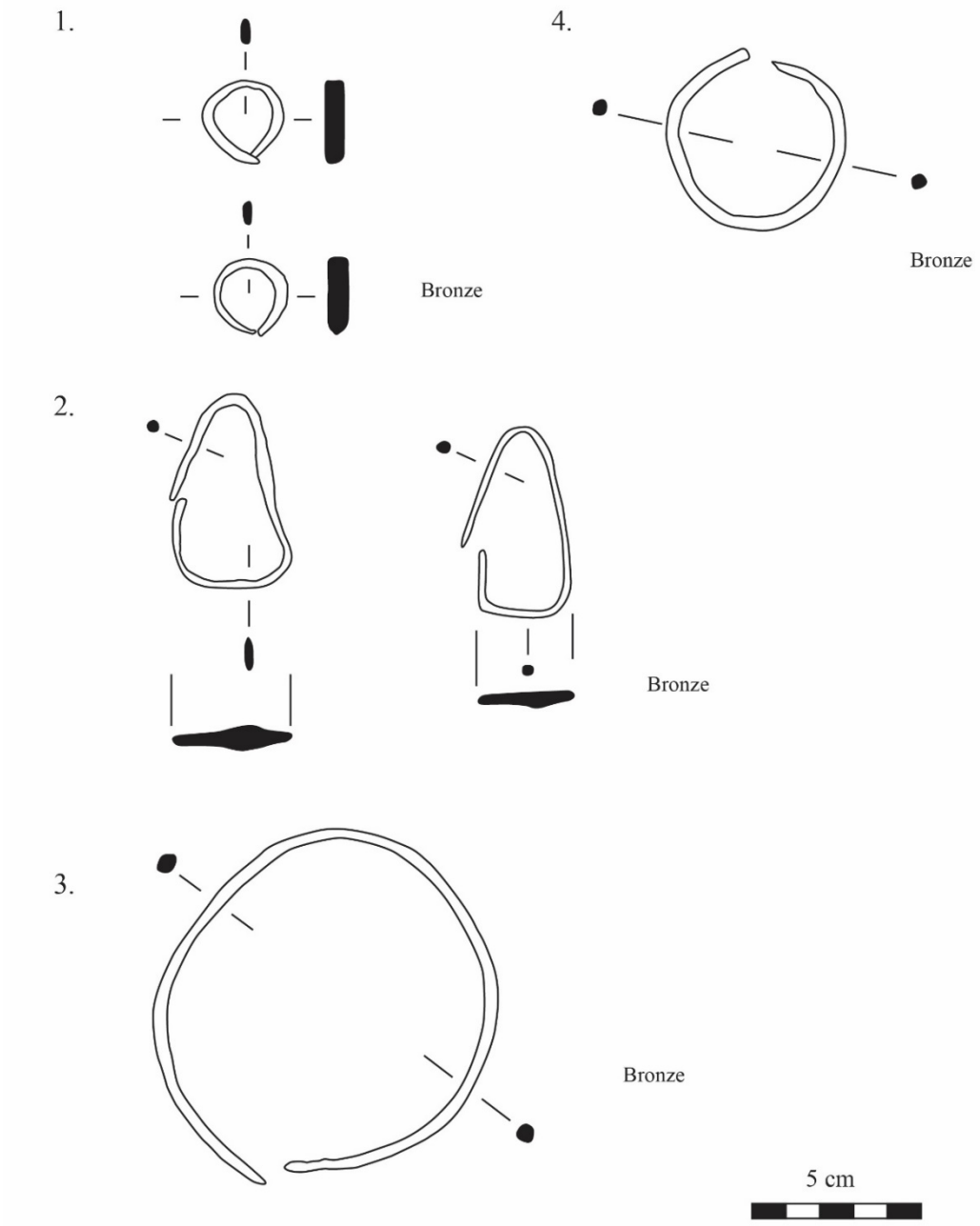


Figure 4.23: Selection of Metal Burial Goods from Gund-i Topzawa 1C-W

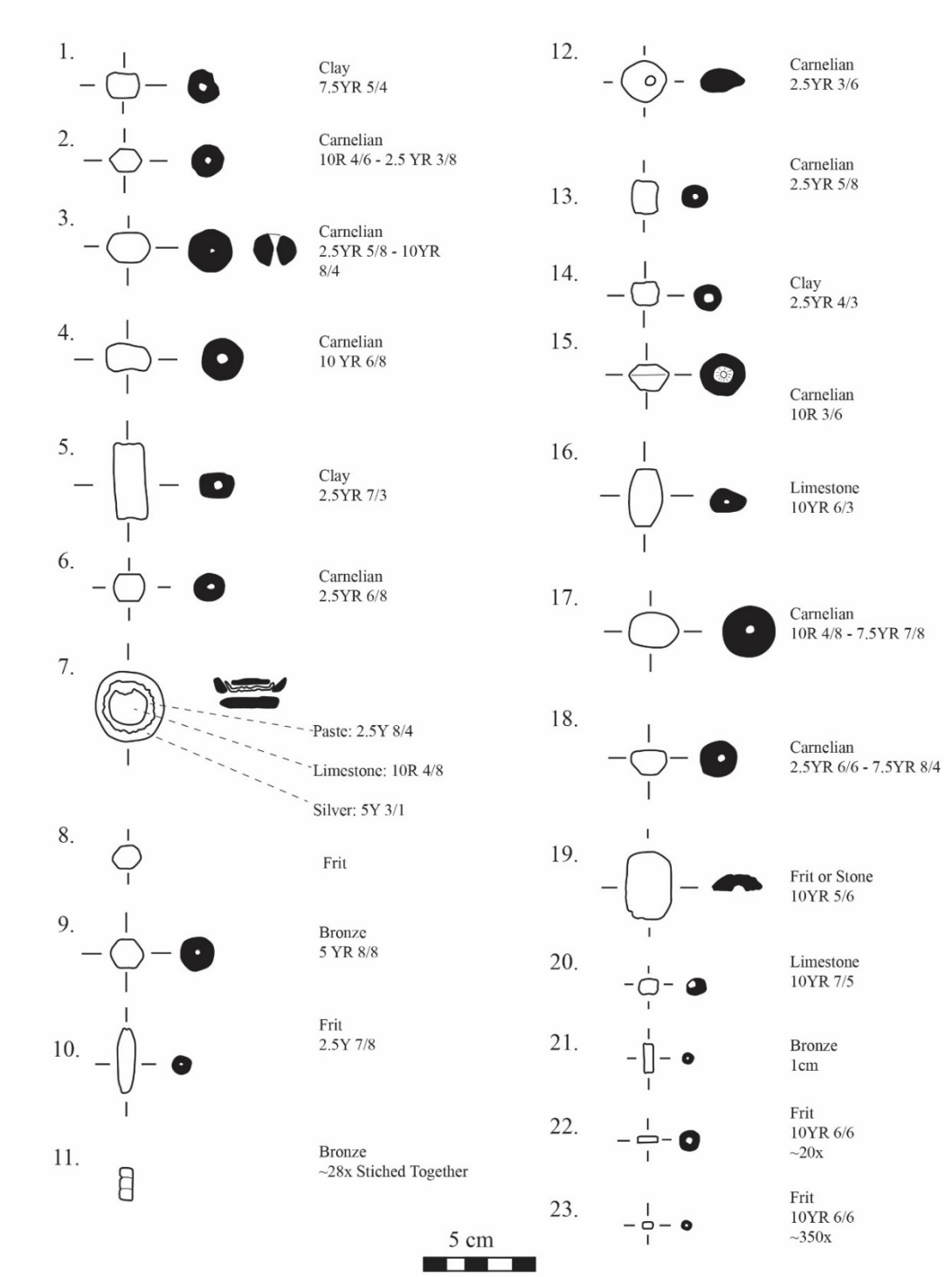


Figure 4.24: Beads from Gund-i Topzawa 1C-W

Conclusion

Three questions framed the overall analysis of Gund-i Topzawa: What was the identity and function of Building 1-W Phase B, its chronological and stratigraphic relationship of the various buildings and phases at the site, and how did its residents interact with their surrounding environment. Regarding the identity and function of Building 1-W Phase B, the architecture and stratigraphy indicate it was a two-story building functioning primarily as a domestic homestead. Its first floor was built on large bedrock outcroppings, utilizing the space to create functional areas. Notably, all of the first floor rooms seemed to have had significant, semi-permanent storage facilities, with cooking or other domestic production surrounding the storage. While the exact use of the second story was not readily apparent from the excavated material and the stratigraphy, the finds from the upper levels of the collapse and comparable ethnographies suggest those rooms were a combination of living and sleeping areas with storage of minor tools.

In addition, the building's roof likely was covered with a combination of mud and fauna from the surrounding area, evidenced by the rich archaeobotanical material in the top level of the collapse. It was notable that the entire assemblage of ceramics and finds resembled a prototypical Urartian site, with only the absence of fine, elite goods and cups differentiating this domestic site from the royal residences. Despite a large number of grape seeds, there was no direct evidence for large or medium scale wine production, although a small vat of production cannot be ruled out. Further, there was no evidence that Building 1-W Phase B was part of a terraced series of buildings up the hill's side. The stratigraphy of the collapsed material was representative of a second story with

storage of some objects on its roof. No evidence indicates a terraced structure above with collapse onto Building 1-W Phase B. During excavations, I surveyed the hillside directly above Building 1-W Phase B and, in addition to not locating any archaeological material, noted the remaining soil above bedrock was mere centimeters thick. Thus, there was an insufficient platform to create a strong foundation for buildings.

The chronology of Gund-i Topzawa is vital for establishing the length of occupation not just at this site but throughout the Sidekan area. Gund-i Topzawa's stratigraphy, with little subsequent overbuild, made establishing a single stratigraphic chronological relationship difficult. The earliest occupation was at Building 1-E, starting as early as the 12th century. Its neighboring building dated to the 9th century, despite the two structures' proximity and equal levels. Excavations in the eastern portion of Gund-i Topzawa did not reach lower elevations and could not confirm or deny phases predating Building 1-E's 12th-century date. However, Building 1-W Phase A, the excavation in the modern roadway, did indicate an earlier structure that served as the foundation to the 7th-century primary occupation of Building 1-W Phase B. While we did not recover sufficient evidence to provide a date for Building 1-W Phase A, the meager remains suggest a possible Late Bronze Age or Early Iron Age date, roughly contemporary with the structures in the east. Building 1C-W's squatter occupation and burial date a few centuries later, but none of the other material around Gund-i Topzawa indicates a substantial occupation after the destruction of Building 1-W Phase B. Gund-i Topzawa's chronology and stratigraphy lack clear subsequent layering, typical in mound-type sites. Instead, it appears the village residents either abandoned old buildings (1-E, 2-E),

creating new ones adjacently, or in some cases did build directly on top of earlier buildings (1-W, possibly 1-E). This behavior creates additional difficulty locating buried archaeological sites, as topographic clues can not guide subterranean remains. However, the behavior was a logical result for the residents, given the surrounding landscape's topography.

The specific positioning of Gund-i Topzawa in the landscape will be expanded upon further in a discussion of nearby surveyed sites, but the excavation of the site made clear that the residents adapted to the surrounding landscape. Most notably, the existence of such large quantities of bedrock jutting into the first floor and forming part of the building's architecture demonstrates not only awareness of the surroundings but an appreciation of their role in supporting their occupation. Further, the quasi-terracing of Building 1-W Phase B, with Wall 1 serving as a large retaining wall, evidences their knowledge of the ideal slope to build houses. From the available evidence, the organization of houses at Gund-i Topzawa stretched along the valley's slope rather than clustering in a central location. During the British Mandate Period in the mid-20th century CE, an ethnography recorded a nearby village of Sidekan and Gund-i Topzawa, named Rust. It was located approximately 20 km south of Gund-i Topzawa, on Hassan Beg Mountain's alternative side, with approximately 130 houses (Galloway 1958). The study primarily focused on the crops surrounding the small town and their domestic economy, with no focus on the buildings' structure. However, the town's organization resembled the Iranian villages of Hasanabad and Aliabad, with the houses clustered together. Gund-i Topzawa's elongated organization was likely due to the geography, which could not

extend much further downslope towards the river. Overall, Gund-i Topzawa was likely indicative of the settlements that covered not just the landscape of Iron Age Sidekan but of many Iron Age intermontane landscapes.

Ghaberstan-i Topzawa

Ghaberstan-i Topzawa is a small tomb in the Sidekan area, exposed by the same road construction that revealed Gund-i Topzawa. RAP excavated the site in 2013, quickly recording the at-risk archaeological material before the cessation of the field season. Research from this section primarily comes from Dr. Danti's report to the Kurdistan Regional Government (KRG), a brief site report in *Expedition*, supplementary information from excavation material and documentation, with additional analysis performed by myself (Danti 2014b; 2014a).

The aforementioned road construction initially exposed Ghaberstan-i Topzawa, as well as other sites (discussed in detail in the following Survey Chapter). The earthmovers destroyed the south side of the tomb and knocked one of the roof's slabs into the roadway. Disturbance at Ghaberstan-i Topzawa attracted the attention of locals and, subsequently, the Directorate, as the human bones from the site fell onto the road. In addition to the disturbance at Ghaberstan-i Topzawa, many small, 1-2 m stone box burials, presumed to be Islamic burials, were also damaged by the road construction. Nearby Ghaberstan-i Topzawa, a few meters uphill, are gravestones indicating the area's identity as an early modern cemetery. Multitudinous bones littered the road after construction moved through the area, and the Directorate collected many of them for

storage. Importantly, discussions with nearby residents indicated that any people buried in the aforementioned cemetery were long before their time, and they were unaware of their identities. While the RAP team was working in Soran, Director Abdulwahab Suleiman requested we conduct an emergency excavation of the site. A small team went to the site and conducted eight days of excavations before the end of the 2013 season.

The site is ~3 km northeast of Gund-i Topzawa, along the north side of the Topzawa Çay, near where the eastern end of the valley ends. This route is crucial as it follows the main road from Sidekan up to the Kelishin Pass. Around this point in the Topzawa Valley, the width of the valley begins to narrow. Less than a kilometer to the east, the road stops following the slope of the Topzawa Valley and begins to switchback into the mountains, heading to the Kelishin Pass. This point marks the end of the Topzawa Valley and the last significant agricultural land before heading up to the peaks of the Zagros Mountains. Thus, its location was at the far outskirts of ancient habitation in the Sidekan area.

Ghaberstan-i Topzawa itself is a small stone tomb cut directly into the hillside, with intact walls on three sides, north, east, and west. The southern exposure, revealed by the construction, provided an entrance into the tomb. The walls were constructed with medium-sized, roughly worked limestone slabs, stacked slightly inward, about 2.5 m high. On top of the walls, a stone roof remained, with large boat-shaped, worked limestone slabs cantilevered over the walls. One of the central slabs contained a large crack that caused some concern for the excavation team. Throughout the excavation, the roof remained stable and, upon a brief resurvey three years later, continued to maintain its

strength. Running atop the stone roof was a thin layer of red topsoil. The resulting shape of these walls and the roof is a beehive-like structure, albeit with more angular corners than a beehive's circular shape. The tomb chamber itself was oriented 345° west of magnetic north and had a maximum height of 1.85 m. Despite the road-widening destruction, the layout of the artifacts and inhumations in the room made clear the existence of a door along the southern wall in antiquity. Excavations in the tomb's southern area revealed a high incidence of river pebbles, notably different from ubiquitous slate and limestone throughout the rest of the tomb. Although not drawn in detail, the stratigraphy of the soil around the wall and roof of the tomb provides evidence that the walls were cut into the hillside itself, with the roof near the hill's surface. Thus, the tomb was likely constructed by digging a hole into the gentle slope of the lower section of the hill, leaving an exposed roof and a door on the lower slope of the hill to allow access for subsequent inhumations.

Excavations inside the tomb revealed large quantities of ceramics, including intact vessels, metal artifacts, and at least 11 bodies. The tomb had three phases, an original phase of repeated internments at the tomb's original floor (A), a period of abandonment (B), and a reuse phase (C). The tomb's primary use occurred in Phase A. This level is separated from the phase above by a thick layer of stone collapse. Within the collapse are fragments from the phase's uppermost burials as well as ceramics and metal artifacts. Notably, we recovered a snake-head bracelet and a copper earring within this stone collapse. Over the course of an unknown number of years, at least six bodies were interred in the tomb.

The stone collapse delineating Phase A and B crushed a skeleton in the upper portion of Phase A. Around this upper skeleton were the aforementioned bracelet and earring. Below the collapse were many skulls located around the tomb's edges, with disarticulated associated bones. Instead, the bones were apparently stacked in piles around the skull. Apart from the two skeletons fully articulated in the center of the tomb, the remaining bodies were pushed or stacked at the tomb's edges. Given the lack of ornaments associated with the perimeter burials, it appears the tomb was reused over many years, possibly through generations, and upon each new burial, the previous inhabitant was neatly stacked aside. Unsurprisingly, their more valuable adornments, like jewelry or other metal goods, were taken in this process. The bodies' stacking pattern would indicate their decomposition by the time the bodies were pushed aside, as the bones' arrangement, a stack, would be impossible as a fully intact corpse. Further evidence of continual use is the tomb's heavily compacted red clay floor, caused by people treading on the floor over an extended period of time. Unfortunately, RAP's osteoarcheologist could not examine the skeletons, so we currently do not know any associated information about the bodies, such as their age or sex.

Phase B provides evidence of Phase C's much later use phase. The phase is approximately 40-60 cm thick and sterile. Deposition is fluvial and aeolian, without any large stone fragments, cultural remains, or bones. This degree of homogeneity suggests two possibilities for the abandonment phase. One, the most likely explanation, was the tomb's blocking was largely intact after the end of its use in Phase A, and any soil came into the tomb from gaps in the blocking as well as water seeping through the

construction. A second explanation would be an open doorway, but the absence of animal bones or any other material is difficult to reconcile in that interpretation. Thus, the first explanation would seem to be the most likely. This suggests that after the initial use phase, a stone blocking was placed at the entrance before eventually falling inwards and damaging much of the tomb's contents, possibly opening the possibility for looting.

Phase C consisted of four burials articulated in their original inhumation position but disturbed by the roof collapse and construction damage. Three burials lay parallel in the chamber, arranged with their heads facing west, feet to the east, and arms extended at their side, with one burial, Skeleton 3, right below the two parallel burials. Although an Islamic burial nearby suggests an Islamic identity of these burials, Islamic burial rules dictate that the deceased lay on their side, with their right face down, facing towards the Qibla in Mecca (Khu'i 2015, v. 622). Given the destruction disturbed the skulls and the post-cranial skeletons, we could not confirm the bodies' position. One further burial, Skeleton 4, was slumped against the north wall of the tomb and was likely the first interment in the tomb, given its stratigraphic positioning compared to the other three burials. We found no further cultural material among the burials in Phase C, and any charcoal samples collected were believed to be post-depositional. Among the human bones were animal bones, including at least two canids, although none fully articulated, suggesting an open tomb for at least some time rather than a deliberate canine burial.

The dating of the tomb relies primarily on ceramics and personal ornaments, along with a radiocarbon sample's date. The tomb contained a serpent-headed bronze bracelet, along with beads and twisted-hoop bronze wire earrings. The bracelet has strong

parallels with those in the Achaemenid cemetery at Ghalekuti and Achaemenid Village I at Susa (Ghirshman 1954, Pl. XXXIX; Haerinck 1989, fig. 4 no. 7). The complete vessels have comparanda from across the Near East. One, a spouted jar found in grasp on a skeleton, is similar to the material at Hasanlu IIIa, Yesilalic II, Pasargadae, and the Spring Cemetery at Persepolis (Ghirshman 1954, Pl. XXIV no. 6; Young, 1965, fig. 2 no. 5; Sevin 1985, fig. 4 no. 5). Another of the spouted jars parallels examples at Agrab Tepe and Hasanlu IIIa (Dyson 1965, 205,212 n. 36; Muscarella 1973, fig. 15 no. 8).

The serpent-headed bracelet and the associated earring are strongly linked to the Iron IV and Achaemenid Periods at Ghalekuti and Achaemenid Village I. Specifically, Ghirshman dates the Achaemenid Village I from the 7th-6th century (1954, 20). The bulk of the pottery has a similar dating, although some of the comparable sites date slightly earlier. Yesilalic II, for example, dates to the post-Urartian collapse, and Agrab Tepe "flourished during the seventh century BC" (Muscarella 1973, 73; Kroll 2014, 204). As the material dates to the end of the Urartian and Achaemenid Periods, the use of Phase A may have begun as early as the late 7th or 6th centuries, although possibly beginning later.

While the artifacts in the tomb's Phase A support an Achaemenid or pre-Achaemenid date, a carbon sample from the tomb's floor dates after the Achaemenid Period, to sometime between 359-89 B.C.E. While these dates would correspond to a Seleuco-Parthian date, none of the material matches a typical Seleuco-Parthian assemblage. One possibility is that the charcoal entered the tomb after the final interment, as the articulated burial with the associated bracelet dates centuries earlier than the range of the carbon date. Alternatively, the latest burial is contemporary with the carbon date,

and the objects were reused centuries later. Regardless the final inhumations and beginning of Phase B began sometime at the end of the first millennium B.C.E.

Reuse of the tomb with subsequent burials is a characteristic that begins in the late Iron I in Luristan and spreads across the broader Near East by the Iron II Period (Haerinck 1989, 457; Sevin 2003, 187; Overlaet 2013). This architectural style of tomb, depending on its exact layout, has its origin in the Early to Middle Iron Age. In the Early Iron Age, around Lake Van, the progenitors of the Urartians first created simple cist tombs, a rectangular box with slightly arched walls dug into the ground and covered with large, flat, cobbled stones (Sevin 2003, 187–88). The second style bears several similarities to the Ghaberstan-i Topzawa construction. In addition to those tombs' rectangular shapes, the defining feature is an entranceway for the inhumation of new corpses over subsequent periods (Sevin 2003, 188). Like Ghaberstan-i Topzawa, the existing remains would be pushed towards the edges of the tomb to clear space for the new burial. This style led to the Urartian multi-chamber tombs and remained a ubiquitous style in subsequent centuries.

Comparable examples of this tomb may exist elsewhere in the Sidekan subdistrict. During Boehmer's survey of the Sidekan area, he notes a "dolmen" in an area named Huwela, about 2 km south of Qalat Mudjesir. While his report does not have many details, only one photograph of the structure and two reported diagnostic sherds, the limited information about the structure and location provides a connection to material located in RAP's surveys. About 4 km south of Qalaat Mudjesir, along the same hillside that Huwela must lie along, a collection of locals led us to two structures called

Ghaberstan-i Kanisql. While I discuss Ghaberstan-i Kanisql in more detail in the subsequent Survey Chapter, its construction and that of Huwela bears similarities to Ghaberstan-i Topzawa. Although the sides of Kanisql resemble that at Topzawa, the roofs are constructed differently, without large blocks spanning the roof. Without further research at Ghaberstan-i Kanisql, it is impossible to parse out the relationship of these structures, but the freestanding structure provides evidence in support of the proposed southern entrance at Ghaberstan-i Topzawa.

Next to Ghaberstan-i Topzawa, directly to the east, is another structure of uncertain identity. Its best description is a "semi-subterranean pit house," although we did not excavate it fully enough to understand stratigraphic relationships in detail. From the exposed section along the road cut, in addition to some further cleaning, there is a wall of at least five courses cut into the original surface. Between the wall and the cut contain some extra soil, presumably packed to stabilize the wall. The lower two courses of the wall were constructed of cobbled stones, and the upper three courses were a combination of limestone and slate. This eastern edge of the wall continued north into the section, curving west. In the middle of the floor of the structure was a relatively large piece of worked limestone, 50 cm tall. Above the rock are a series of clay strata mixed with slate and limestone fragments, and a surface slopes down from the direction of the tomb, filled with the slate, limestone, sand, and other soil. After the initial use of the structure, the space seems to have been filled with construction debris from the tomb. There may still be other tombs in this area, but the expedited investigation did not allow for further

investigation. The limited ceramics recovered from the cleaning largely resemble that from the tomb.

Sidekan Bank

Located in the Sidekan Valley System, specifically on the outskirts of the town of Sidekan itself, is the eponymous Sidekan Bank site. Its name derives from the interrupted construction of a bank that revealed archaeological deposits in the foundation. In 2014 Abdulwahhab Suleiman, Director of Soran's Department of Antiquities, asked RAP to conduct a site assessment. The first site inspection occurred May 14, 2014, with assistance from Dlshad Mustafa of the Antiquities Department, and documented a series of burned strata in the construction trenches. Construction on the bank had already progressed in creating a central concrete foundation, and upon arrival, the team found a large trench running around this central concrete core. Although Mr. Suleiman stopped the construction to analyze the archaeological remains, the destruction of any archaeological remains in the building core already occurred. A small RAP team conducted excavations over five days in the Summer 2014 season. Overall, the limited exposure and brief excavation time prevented the team from coming to in-depth conclusions about much, except for the site's periodization, which helps fill out the understanding of the Sidekan area in antiquity.

The primary excavation took place over five days in June 2014. The team laid down two small excavation trenches along the eastern construction trench to link the exposed vertical stratigraphy, excavated a 2 x 2 m trench on the surface nearby to a few

centimeters, and drew the eastern and northern trench's section. Overall, the excavation yielded ca. 700 sherds, but only 27 diagnostic sherds, 13 of which have identifiable characteristics. The limited ceramic assemblage provides little help in dating the site. Fortunately, a trio of radiocarbon dates provides a firm dating for the 5th -6th-century C.E, and a small roughly preserved stamp seal confirms a 5th – 6th-century Sasanian occupation. The two small excavated areas along the eastern construction trench (technically Operations 1 & 2, although only divided by the preexisting construction trench) helped link the profile with stratigraphic and chronological dating.

Operation 1, the eastern construction trench, effectively consists of two sections, cleaned and drawn. Although there is no definitive connection between the two sides, their elevation and the distance suggest their association. Excavation along the southwestern side of the trench uncovered a floor cut into a natural conglomerate of rocky reddish-brown loam. No walls surrounded this floor, and the floor was about 60-90 cm below the modern surface. Notably, a large pithos was sunk into the floor, through the natural conglomerate, with fragments of a secondary pithos nearby. Unfortunately, the rim of the large pithos was destroyed, preventing a determination of its diameter. Regardless, the vessel was large enough to store a large number of goods. A pithos sunk into the floor is not uncommon throughout history, but at Jandavlattepa in Sasanian Central Asia, multiple pithoi were sunk into the floor of a domestic quarter (Stanco and Abdullaev 2012, 49). At another site, Ak-Tepe, also in Central Asia, pithos were sunk into the floor in an apparent storeroom (Sedov 1987, 16). Burying pithos to have the

ground serve as support and using its high storage capacity was common throughout time and continued into the mid-first millennium CE.

Charcoal and other debris from a large conflagration event were on the exposed floor, including the pithos below. We recovered chunks of charcoal as large as 2 cm in diameter from this phase. Three of the samples, two from Operation 1 and one from Operation 2, were carbon dated at the University of Arizona's AMS laboratory. The two samples in Operation 1 were located at the top of the collapse and the floor of the structure. Both date to the 5th-6th century, with sample 1043 lying on the floor and having a slightly later range. The sample in Operation 2, however, dates later, most likely between 534-610 C.E. Almost directly above this collapse layer was the original topsoil, topped by the piled debris from the construction. The nature of the debris and the lack of stone walls imply a wooden structure, possibly coated with mud along its walls or roof. The thin level of topsoil dividing the structure's collapse layer and the surface implies a likely single occupation period at the site with continued post-depositional tilling of the soil above combined with erosion from areas uphill.

The eastern side of the construction trench was not excavated to the same extent as the western side, and thus some of the conclusions are more difficult to ascertain. No sunken pithos or floor cut into conglomerate exist on this side, although the burn layer is present here. The burn layer runs directly up against a large boulder, which may or may not be a feature of the architecture. Although unexcavated or cleaned, the north trench (Operation 2) displayed a burned stratum, ~12 m long and 20-30 cm thick, with two separate visible ash lenses. One section of the floor, directly below the burned stratum,

had an opening, roughly the size of a pithos, that may have contained a vessel like that in Operation 1, although it was no longer present.

In addition to the two sections of excavation immediately along the profile created by the construction, the team laid out a 2 x 2 m excavation square on the surface nearby, Operation 3, located ~15 m from Operation 1. We laid down this small sounding to test the limits of the structure(s) at the site. Unfortunately, due to time constraints, the square was only excavated ~20 cm deep. A collection of stones, the tops of which were exposed, may indicate a wall running through the trench, but without deeper excavations, that theory cannot be confirmed. Given the excavated portions revealed burn layers far below the exposed area of Operation 3, and those excavated portions seemingly did not show substantial stone walls along the burned floor, the stones in Operation 3 should not be designated walls automatically. The low depth of these exposed stones, however, does correspond well with the thin topsoil layer observed in Operation 1 & 2.

In addition to the collected pottery, the team recovered a highly eroded stamp seal from cleaning the western section of Operation 1. The seal's design was nearly unidentifiable, a hard to distinguish series of curved lines emanating out of another curved line that could be one of any number of signs or symbols. Fortunately, Sasanian stamp seals have distinct shapes that help identify and date them. The seal was made of a glazed frit, with a thin hole running through the body, and was a bead or simply worn with a small string in antiquity. Its shape, domed and ovaloid with a rounded back, is indicative of Sasanian seals dating to the 5th-6th centuries (Metropolitan Museum of Art and Brunner 1978, 8).

Sasanian seals and their accompanying stamps are among the most distinctive characteristic signs of occupation during this period, dating roughly from the 2nd to 7th centuries C.E. Sasanian pottery has only a handful of diagnostic types, leading to seals and other finds as the primary indicators of Sasanian occupation. Nearby sites show evidence of Sasanian occupation by distinct ceramic typologies. Notably, at Zawi Chemi Shandiar, a small site by Shanidar Cave, the upper levels, excavated in 1956, 1957, and 1960, contain "Christian Ware" (Solecki 1980, 1, 6). This pottery, both variations of fine and coarse ware, was impressed with crosses or other designs, in addition to "simple fine-line combed decorations, or single incised curvilinear designs" and glazed ceramics (Solecki 1980, 6–7). While Solecki did not connect "Christian Ware" with a typical Sasanian assemblage, these stamped designs on pottery are part of typical Sasanian ornamentation (Simpson 2013). The material at Zawi Chemi Shanidar, specifically bitumen-lined pithoi and three coins, provide connections to our work at Sidekan Bank. Unlike the pithoi at Shanidar, the Sidekan Bank pithoi are not coated with bitumen, suggesting a different use for the vessels. One of the three coins at Zami Chemi Shanidar provides a date for that site. That coin is a follis of 40 nummia, indicated by a large central M. It was produced in Constantinople by the fifth workshop of the mint, during the reigns of Anastasius I (491-518), Justin I (518-527), or Justinian I (527-565), providing a date between 498-538/9 (Solecki 1980, 71). This dating overlaps significantly with the range of carbon dates at Sidekan Bank, perhaps suggesting increased activity in this area during the 5th century. Notably, the campaign of Narses, under Emperor Maurice, was the Byzantine ruler immediately subsequent to Justinian I,

suggesting the coin made its way to the region during that campaign or a continual presence by the Byzantines and their traders.

Sidekan Bank's ceramic assemblage has few typically Sasanian diagnostic ceramics, which is unsurprising given the small collection of about a dozen diagnostic pieces and the poor understanding of Sasanian common wares (Gavagnin, Iamoni, and Palermo 2016, 155). Of these dozen sherds, none correspond well with any of the typical Sasanian typologies. Many Sasanian sherds tend to be highly decorative or elaborate. For example, Stamped Wares, discussed above, are the most diagnostic pieces of the period (Simpson 2013). Further, so-called "Corrugated-rim jars" are another primary signifier of Sasanian occupation. Sasanians decorated these rims with multiple bands of ribbing, often with additional incisions or other decorations (Puschnigg 2006, 135, 223; Stanco and Abdullaev 2012, 51; Simpson 2013, 99). In contrast, all the rims of comparably sized vessels at Sidekan Bank are plain. Other typical Sasanian wares, like "Honeycomb Ware," named for its heavily pocketed surface, are absent in the assemblage (Simpson 2013, 102). In addition to these types, a majority of diagnostic Sasanian wares are glazed, none of which is evident at this site (Kennet 2004).

Sasanian occupation at a relatively flat site, like Zawi Chemi Shanidar, corresponds well to the theory of an increase in nomadism and pastoralism during the period (Wilkinson 1995, 69–71). Further, the Land of Nineveh survey, to the west, indicated that multiple Sasanian sites were new foundations, not built on top of the remains of earlier settlements like in previous periods (Gavagnin, Iamoni, and Palermo 2016, n. 27). If Sasanians built semi-nomadic settlements on new foundations, these were

often modest structures. At Jandavlattepa, structures made of rammed earth, mudbrick, and small wooden circular buildings provide evidence for more ephemeral construction (Stanco and Abdullaev 2012, 46). Given the type of excavation at Sidekan Bank, largely cleaning sections versus controlled vertical excavations, the team would not have been able to identify postholes suggestive of a wooden building. The basic walls, large storage pithos, and lack of elite wares, along with its location at the flat portion of the valley, directly in the core agricultural zone, suggest Sidekan Bank was not a primary habitation area but rather a gathering and storage loci for the surrounding farming and pastoral activities.

While one interpretation of Sidekan Bank is of a small site on the outskirts of a large town in the area of modern Sidekan, two pieces of evidence refute that. One, conversations with locals in Sidekan and limited survey in the streets suggest there is no sizeable archaeological presence in the core of the town itself. A large presumed mound near the center of town, east of Sidekan Bank, was later cut by construction and revealed to be a natural feature. The only archaeological remains were large pithoi sunk into the surface, of a different, far more orange, ware than the pithoi at Sidekan Bank. Second, an intensive survey of the rolling hillside directly adjacent to Sidekan Bank, to the northeast, recovered very few sherds.

Concurrent with the excavation, I conducted an intensive fieldwalking survey by snaking transects along the hillside around Sidekan Bank. This area of modern Sidekan was bounded on one side by the modern town to the north and the Sidekan River to the south. Specifically, the rolling hillside abruptly ends with a deep cut leading down to the

riverbed below. While I primarily surveyed the hillside, the limited examination of this cut to look for further possible sherds moved by post-depositional processes did not locate any significant evidence. These transects resulted in less than one dozen sherds, none of which were diagnostic. Further, the pattern of the sherds' findspots did not reveal any arrangement suggesting a more significant settlement nearby.

Combining historical information discussed in Chapter 2, the chronological dating of Sidekan Bank may align closely with the campaign to Aniseni by the Byzantine general Narses and Sasanian king Xurso II. Records from Byzantine historians place that campaign in the year 589 CE. While the site does not show widespread destruction like that at Gund-i Topzawa, the small burn layer could indicate the army's occupation while moving to the Kelishin Pass. One of the three radiocarbon samples (1032) may correspond to that campaign, with an 89.8% probability of falling between 534-610 CE. This does not necessarily suggest the Byzantine forces destroyed the site but rather their presence coincided with the occupation at this site.

Given the focus of the dissertation of the Iron Age, specifically Muṣaṣir, the excavations at Sidekan Bank may seem out of place. Several characteristics of this site, contrasted to the sites mentioned above, are important for understanding and interpreting occupation in the region. Sidekan Bank is the only excavated site in the Sidekan subdistrict that does not date to the Iron Age or Late Bronze Age. It serves to establish that settlement in this area did not wholly disappear, despite the paucity of historical records. Relatedly, the pottery excavated at Sidekan Bank is minimal and nondistinctive. During survey, the absence of pottery on the surface in Sidekan greatly complicates

locating sites and dating (Chapter 5). The nondescript pottery at Sidekan Bank, established as Sasanian only though related finds and carbon dating, would not assist in dating sites if found on the surface. The Sasanian pottery in Sidekan bears more similarities to the Iron Age ceramics than the classic Sasanian diagnostics; thus, it is important context when attempting to date sites with pottery alone. Further, the nomadic or ephemeral settlement at Sidekan Bank, in the center of the central agricultural basin in Sidekan, is indicative of the settlement types in the lowlands of Sidekan as well as the possibility of changing settlement patterns into nomadism after the Iron Age.

Chapter 5 : Survey of the Sidekan Subdistrict

As a part of the larger Rowanduz Archaeological Program (RAP), the objectives of the Sidekan survey were to gain an understanding of the types of settlements in the accessible areas of the subdistrict and determine the chronological extent of occupation. These data informed RAP's overall goals of establishing a diachronic sequence in the region and investigating agricultural land use. In addition, survey activities in the Topzawa Valley planned to document partially damaged sites along the road cut, noting architectural features and ceramics comparable to the excavated occupation at Gund-i Topzawa. The survey of the Sidekan subdistrict occurred primarily in 2014 and 2016, with the 2013 season limited to recording previously documented sites from Boehmer and Fenner's (1973) project. Due to the survey project's absence of an independent budget and staff, the survey methods, amount of time, and team size were ad-hoc and inconsistent between seasons and days. For example, while the 2013 and 2014 seasons occurred during the summer, the 2016 season primarily took place in October. However, I was present for all but one of the survey excursions, often accompanied by other RAP team members or employees of the Soran Department of Antiquities. While the inconsistent survey timing and methods provide difficulties in making direct comparisons between sites using the available data, my recollection is intended to bridge some of the recording gaps.

Conducting this survey in Iraqi Kurdistan during 2013 – 2016 came with a set of challenges and constraints beyond the control of the project. Chapter 3 reported on the difficulties and lengthy period to obtain the excavation and survey permit. Fortunately, the permit's broad mandate for survey allowed work across the Rowanduz, Diana, and Sidekan subdistricts. However, external geopolitical events constrained the projected further, beginning with ISIS' occupation of Mosul in 2014 that, in addition to the immediate humanitarian crisis, constrained our ability to move around the area. In 2017, the Iraqi Kurdish referendum on independence and the subsequent closure of the Erbil airport by the central government halted plans to return for fieldwork (Zucchino 2017). Throughout the project, the presence of two foreign Kurdish militant groups operating cross-border activities – the KDPI, from Iran, the PKK, from Turkey – limited survey and travel of the Sidekan subdistrict to only the valley systems directly adjacent to Sidekan, Topzawa, Bora, and Hawilan Basin (Figure 1.1).

While Chapter 1 introduced the geographical background of the region broadly and the Sidekan subdistrict specifically, dividing the subdistrict into smaller graphic units highlights their topographical differences and assists in the discussion of site locations (Figure 5.1). The accessible and surveyed subareas are Mudjesir, Sidekan, Topzawa Valley, and Hawilan Basin. In addition, the so-called "Old Sidekan Road" serves as the shorthand for the land alongside the Sidekan and Barusk Rivers, starting at Shiwan and extending eastwards to Shakh Kiran Mountain. Sidekan and Mudjesir form the core of modern occupation (Chapter 4). Sidekan's optimal settlement positioning is due to its location on the 4 km wide plain at the confluence of the Topzawa, Bora, and Zanah

Rivers. Mudjesir's advantage derives from its adjacency to Sidekan and position along the route towards major population centers to the west. The Topzawa Valley follows its eponymous river almost 10 km from the eastern extent of Sidekan up to the ascending peaks of the Zagros Mountains *chaine magistrale*. The Hawilan Basin is the elevated northern slopes of Hasan Beg and Musa Kawah Mountains. The paved new Sidekan Road descends from the pass adjacent to Hassan Beg Mountain down to Mudjesir, including the area south of the Sidekan River. The Old Sidekan Road largely follows the path of the Sidekan River descending through the mountains as it becomes the Barusk River.

Additional subareas warrant mention, although we did not have the opportunity to travel to those areas. These include the Nazar Basin, Senne Valley, Bora Valley, the Kelishin Pass, and the many high mountain peaks in the area. The Nazar Basin extends approximately 14 km north of the Barusk River to the inaccessible valleys of Barasgird and Kwakura, and 20 km east-west, bounded on its eastern border by Shakh Kiran Mountain and its western border by multiple peaks, including Sari Mountain. The Senne Valley is a narrow valley comprising an eponymous river with little farmable land on its sides. Before constructing the road along the Topzawa Valley, one of the primary routes for reaching the Kelishin Pass. The Bora Valley runs roughly parallel to Topzawa, although its headwaters do not lead to the Kelishin Pass. Accessing the Kelishin Pass was impossible due to our political status and the dangerous terrain.

Methodology and Methods

Locating and recording archaeological material culture and sites are the primary functions of site-focused survey projects. The methodology of locating archaeological material and sites generally fall under two categories: intensive and extensive. While extremely reductive, intensive survey looks intensively "down" at the surface for artifacts indicative of archaeological occupation, and extensive survey looks broadly "outwards," searching for indicators of archaeological sites. While neither method is inherently better or worse, the history of archaeological survey moved from using exclusively extensive techniques to intensive survey with increasingly small scale and units of observation. Extensive survey includes reconnaissance, searching for sites at a large scale – often using vehicles or remote sensing – and pedestrian extensive survey. Early archaeological survey projects employed extensive methods almost exclusively, often using vehicles to traverse the landscape to find the locations of clear topographic features, like archaeological mounds (Adams 1981; Braidwood 1937). While sufficient for locating large or obvious sites like the mounds of the Near East, that method of surveying was insufficient for other regions with more concealed archaeological remains like the regions surrounding the Mediterranean Sea.

Intensive survey methods use pedestrian survey for locating individual artifacts, using techniques like field transects or small subdivisions of the landscape like collection grids (Orton 2000). In contrast to extensive survey, artifacts serve as the primary data point for intensive survey, usually using the distribution and density of artifact scatters as a proxy for a site. Given the effort expended per m of the survey area, most intensive

survey projects cannot completely cover their project area. Landscape archaeologists developed statistical sampling methods of drastically differing complexity that enabled analyses for entire areas using only a small subset of spatial coverage (Banning 2002, 7; Collins and Molyneaux 2003, 6). Using the artifact as the core data point for sampling, archaeologists could use a small sample of all possible data to make conclusions about the site and regional relationships (Binford 1964, 429–35). In study areas with fewer artifacts or obscured sites, intensive surveys with sampling enabled further conclusions about the extent and nature of settlement.

Extensive surveys in the Mediterranean, like that of Messenia in Greece, were successful in locating hundreds of sites in their survey area, but the conclusions following the recorded data, such as the size of communities or occupation, were revealed as incomplete when followed by intensive survey projects (McDonald and Rapp 1972). The Messenia survey, for example, located sites using topographic features of known Mycenean era sites as a guide. However, a project with intensive survey methods in the succeeding decades located eight times the number of sites and resulted in a changed understanding of the types of sites – specifically small sites originally interpreted as farms (Bintliff et al. 1999, 141–2).

While intensive methods enable new analyses, including detailed taphonomic studies concerning plowing's effect on site recovery and surface visibility of sherds, as well as the finer scale of detail about settlement patterns, archaeologists did not abandon extensive survey (Ammerman 1985; Dunnell and Simek 1995). Some practitioners put forward a notion that greater intensity of survey recovery leads to improved outcomes,

but tests of the low density, extensively survey sites of the Near East indicate extensive survey may be sufficient for many projects or regions (Cherry 1983; Wilkinson 2004). Further, the divide between extensive and intensive survey may not always be clear-cut. For example, in the highland Amuq Valley Regional Project survey, they spaced their transects 100 m apart but noted while they considered the survey intensive, many Mediterranean archaeologists would consider the project "semi-intensive" because of the large unsurveyed spaces between transects (Casana and Wilkinson 2005, 27). Factors such as the size of the total sampling universe, the morphology of sites, mode of surveyor conveyance, and site definition often serve as the primary dimensions for defining a survey as intensive or extensive (Hammer 2012, 170).

This following slightly exaggerated example best illustrates the difference and overlap between the two methods: a surveyor begins engaging in extensive survey driving on a road in southern Mesopotamia, locates a large mound in the distance, and then intensively surveys the surface of the mound on foot using transects or collection units divided into equally sized grids of 10 x 10 m. The fictional surveyor's use of extensive and intensive techniques reinforces that these methods are not mutually exclusive or in opposition to one another. In recording sites and materials, the question arises, what is the entity discussed in the surveyor's notebook?

A key part of survey is defining a site, necessary for the practical purposes of recording and analysis of collected material as well as interpreting the significance and implications of the data. While over the last century archaeologists' definition of the word has evolved significantly and gained progressively more specificity, the competing

definitions of site fall along two opposite poles: at one end is the view of the site as a "discrete and potentially interpretable locus of cultural materials," with boundaries around those loci (Plog et al. 1978, 389). The opposite pole sees the landscape as a continuous and varied surface of human occupation, with concentrations of artifacts or landscape features serving as data points indicating the extent and type of human interaction (Dunnell and Dancey 1983).

The chronological evolution of the term site helps explain the current perspectives of the terminology. The usage of the word in archaeological contexts began in the early 20th century. Preoccupation with monuments, predating the beginning of any archaeological research, began evolving to encompass a wider variety of archaeological material, including monuments along with cities, villages, or collections of artifacts. Robert Dunnell (1992, 22) described this early terminology as "a place where something else, be it artifacts or monuments or a combination of the two, occurred." Over the succeeding decades, scholars utilized the term without fully defining its usage, utilizing 'site' as the catchall term for archaeological loci of some activity. By the mid-20th century, scholars attempted to define and provide the factors in what they previously took as implicit. Frank Hole and Robert Heizer (1969, 14) put forth one definition, stating, "a site is any place, large or small, where there are to be found traces of ancient occupation or activity." Gordon Willey and Phillip Phillips (1958, 18) advanced a similar definition, indicating that a 'site' is "the smallest unit of space," for which limits "are often impossible to fix," and must be "covered fairly continuously." While only moderately more specific than their earlier counterparts, one sees the beginning of an evolution away

from the site as a discrete unit towards something defined by artifacts and with ambiguous boundaries focusing on *observation* of material.

Out of the "New" (or Processual) Archaeology school emerged the concept that scientific methods governed archaeological processes. Lewis Binford (1964, 432), a leading voice in this movement, viewed 'sites' as "a spatial cluster of cultural features or items, or both," and that cluster may or may not be homogenous (Dunnell 1992, 24). In Binford's view (1962), sites are products of the behaviors of past peoples that follow laws governing human activity and are not defined solely by the existence of features or artifacts. As the deposition of artifacts follows certain processes, it was not necessary to find every possible artifact to make conclusions, but systematic sampling of areas could reveal characteristics of the past. Thus, by only intensively surveying a small selection of a given survey area and following scientifically rigorous sampling methods, surveyors could generate conclusions about the totality of the zone – the conceptual birth of intensive survey (Collins and Molyneaux 2003, 6). Binford raised the artifact as the base unit of observation to be used in large regional and small localized surveys (1962, 429–431). Using artifacts as the unit of observation, sites are comprised and defined by concentrations of artifacts and their spatial relationship.

Another wave of archaeologists moved away from the concept of the site as a unit of measurement at all, focusing on the idea of siteless survey. Once artifacts became the primary unit of measurement, a survey area becomes a continuous surface, with sites the "foci of surface artifacts" relatively dense by comparison to the background level (Bintliff et al. 1999, 142). Rather than calculations or intuition of density to the "non-

site" background areas, siteless survey attempts to remove the concept of the site altogether. In that framework, a site no longer consists of the base unit of measurement, an artifact, but archaeologists simply collect and analyze the distribution of artifacts (Dunnell 1992). While practical matters arise when recording every artifact individually and analyzing that quantity of data, the non-site approach denotes the apex of the evolution of a site's definition – away from the site altogether.

A further aspect of a site's definition that impacts the analysis of collected material is the ontological basis of a site. In that, archaeologists must answer if a site represents an immutable unit, parallel to some bounded spatial extent by the previous inhabitants or creators of a site, or simply an observed collection of artifacts or features, completely created by the archaeologist at the moment of its observation. Non-definitions of site in the early 20th century believed, at least implicitly, sites were ancient units waiting for discovery, existing outside their own observations. However, modern archaeological theory is unified in the understanding that sites are "synthetic constructs created by archaeologists" (Goodyear et al. 1979, 39). Despite the acknowledgment of that fact, many struggle with the inherent contradictions in language that sites' ephemerality create. For example, one page after acknowledging that sites are synthetic and created by archaeologists, the authors of the above quote state that sites are "encountered" or "discovered" (Goodyear et al. 1979, 40). If archaeologists create sites, they can never be discovered, as discovery is dependent on the pre-existing nature of something.

The many definitions of site and language associated with site survey naturally lead either to a never-ending increasing specificity of density or the abolition of the term completely in favor of artifact collection. The surveyors chosen scale of recording implicitly constrains the site's definition to the collected data types. When a project defines a site as the base unit of measurement, the determination of a site is solely based on individual conceptions of a site. If, instead, a site *consists* of smaller units of measurements, like lithics or individual ceramic sherds, a site's definition relies on the spatial extent, quantity, and boundaries of artifacts. While scores of scholars offer exacting definitions or formulas to provide a universal or near-universal understanding of the word "site" in the context of survey, they all fall victim to the unavoidable differences across projects and regions. Rather, defining a site is not a universal task but a necessary definition for each survey project to present biases and transparency.

RAP's site definition for the Sidekan subdistrict survey is best defined as a convenient linguistic construct for a "unit of collection" that does not necessarily correspond to some discrete, preexisting structure or entity. The word convenient acknowledges the reality that site determinations were done due to the many constraints of fieldwork, not as an indication of archaeological significance. Some sites, like Gund-i Topzawa, were recorded as one site when an equally logical division would record each visible building as one unit. Other sites, like Melesheen, discussed below, were divided as different sites based on modern fields. That division existed solely to differentiate the location of collected pottery. Equally justifiable would be a single site that included all the fields with bags specifying findspots. The following Site Description section attempts

to explain the limits and definition of each of these sites. Individual sites, denoted by the recording convention of "RAP##" (e.g., RAP30), do not have significance and should not be directly compared without knowledge of their characteristics.

How then did RAP locate these varying types of these so-called units of collection? Given the constraints of the project and the landscape, we employed several methodologies that do not fall neatly under the framework of intensive and extensive survey. They included reconnaissance – often driving to areas and led to archaeological sites by locals – extensive pedestrian survey, and intensive pedestrian survey around areas of interest. By far, the most effective method of site prospection involved direct intelligence of known sites or material. Material from Boehmer's publication (1973) provided significant assistance in locating resurveyed sites, as the landscape was altered in the intervening decades. Extensive pedestrian survey primarily consisted of walking areas with expected archaeological material. The hills around Mudjesir and the length of the road cut along the Topzawa Valley were two examples of this type of survey. Our intended unit of collection for this method of survey was a site, not individual artifacts. The final method involved intensive pedestrian survey around areas of known or suspected archaeological activity. The intensive transects nearby Sidekan Bank were an example of this method (Chapter 4). This technique's intention was to record individual artifacts and their positions with sufficient spatial specificity.

These three methods did not use one of the most utilized and successful site prospection tools of the last two decades – remote sensing. The increased use of high-resolution and multispectral satellite imagery and the greater accessibility of historical

aerial photographs transformed many survey projects, with remote sensing analysis and site location preceding most ground-truthing fieldwork. Projects in northern Syria and southern Turkey pioneered the use of CORONA imagery to locate mounded archaeological sites or ancient features like canals or hollow ways, using discoloration and pattern identification and analysis associated with pre-modern alterations of the landscape (Casana 2013; Casana and Wilkinson 2005; Ur 2004; Wilkinson et al. 2004). Satellites in the 1960s and 1970s captured CORONA imagery from before modern agriculture and urban development altered the terrain to its current state, enabling analyses impossible with modern satellite imagery. Even in areas well suited for this type of remote sensing, the image quality and capture season can yield drastically different levels of effectiveness. With higher resolution imagery, remote sensing projects flagged features like roads, hollow ways, and stone constructions, for example (Hammer 2012, 181–185). While utilizing those remote sensing methods, RAP's survey project and the Sidekan survey found them largely ineffective for detecting known and unknown sites, a phenomenon also observed and discussed by adjacent contemporary survey projects.

In the 2014 and 2016 seasons of UZGAR, surveying the valleys and piedmonts nearby in the district west of Soran, the surveyors reported difficulty in ground-truthing areas identified using CORONA or GeoEye-1 satellite images (Kolinski 2016). Visual characteristics that proved successful in identifying mounds or mudbrick in that project's survey of the adjacent Navkur Plain were natural features in the valleys around Zur-i Purat and Dasht-i Harir. Specifically, lighter spots on the image, generally indicative of mudbrick on the plains, were usually stone concentrations of pebble or exposed bedrock

and shadows from the naturally rugged landscape obscured the characteristic shadow marks, often cast from high mounded settlements (Kolinski 2014). Although discussed in less detail, the Khalifan survey had similar difficulties, with satellite imagery primarily leading to preserved stone settlements on promontories (Beuger et al. 2018).

While CORONA imagery proved ineffective for site prospection in Sidekan, two CORONA images (1104-2138 aft and 1107-2170 aft) covered the area with sufficient quality to assist in non-prospection related research questions. The images were captured on August 16, 1968, and August 3, 1969, respectively, and georeferenced in ArcGIS to compare any landscape changes before the military occupations beginning in the 1980s. The images proved useful for understanding the urban expansion or construction in the past fifty years and flagging contemporary inhabited areas that may cover areas of interest for archaeological prospection.

Modern imagery was largely restricted to Maxar/DigitalGlobe[84], available freely through Bing Maps and ArcGIS Pro, as Google Map's coverage of the area often consists of outdated and low-resolution imagery. The imagery's resolution was sufficient for identifying small features on the landscape, but, like the surrounding mountain survey projects attested, archaeological sites in Sidekan do not leave distinct patterns detectable in the imagery. For identifying characteristics of archaeological sites reflected in the imagery, Autoclassification was not possible due to the number of sites and their heterogeneous taphonomic types (i.e., buried and cut at the base of the valley vs. hilltop fortresses). Maxar imagery is restricted to the visible bands of light. After 2016, I

[84] DigitalGlobe Maxar: up to .5 m resolution. 8.47 m accuracy. 6/2/2019

analyzed multi-spectral imagery types (Sentinel, Hyperion, and Landsat 8), but the efficacy of that imagery for site prospection cannot be determined without grounding truth points of interest. While multi-spectral imagery of this type is useful in analyzing the modern landscape for soil health and the extent of agriculture, its efficacy for reconstructing past landscape is limited (Chapter 6). In addition, ASTER GDEM V3 served as the digital elevation map (DEM) for any topographic analysis.

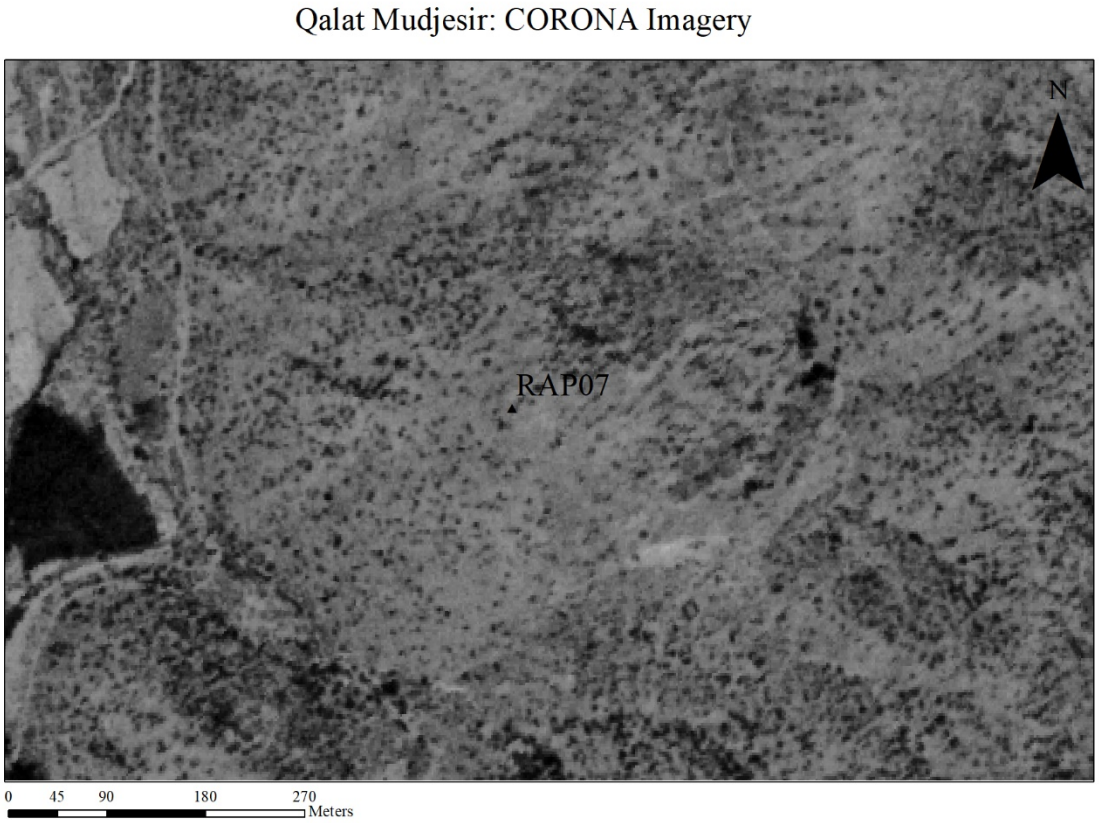


Figure 5.1: CORONA Image of Qalat Mudjesir. August 16, 1968

The near impossibility of identifying sites in Sidekan by remote sensing was demonstrated as early as 2013 when ground-truthing Qalat Mudjesir. Even that hilltop site, with visible walls exposed over hundreds of meters, was not distinct in either

CORONA or DigitalGlobe imagery. Rather, the trenches and other alterations of the site by military occupation left clear marks visible through photographic remote sensing. CORONA imagery of the site of Qalat Mudjesir in 1969, before military modifications altered the site, show few signs of the archaeological site present (Figure 5.1). In comparison, contemporary satellite imagery of Qalat Mudjesir shows the addition of the military trenches that obscure the site's faint wall traces and the small mound of the site's upper building (Figure 5.2).

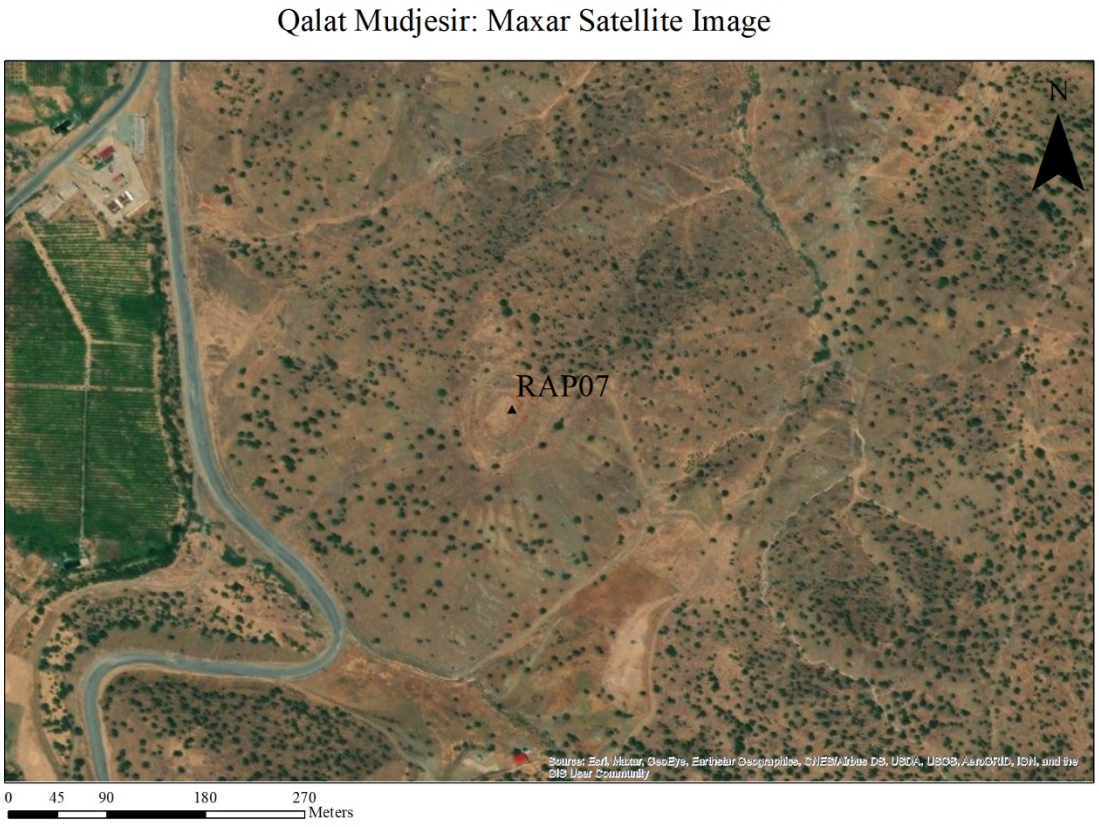


Figure 5.2: Contemporary Maxar satellite image of Qalat Mudjesir with military fortification trenches visible.

Other projects in the region documented how the visual characteristic of these military trenches obfuscated archaeological features (Casana and Glatz 2017, 18–20). As

a coincidence of the site's topography, the trenches resemble the general layout Boehmer and Fenner published. Using remote sensing with much higher resolution, photogrammetry of the site created from flying a drone dozens of meters above, showed the walls and their debris eroding down the hillside, but again the military modifications of the site were the prevalent feature. The military trenches atop Qalat Mudjesir are a further impediment to remote sensing prospection. Many hills and mountaintops in the area exhibit the same patterns as Qalat Mudjesir, now known to be military trenches, obscuring any possible archaeological features. Further, the continued existence of minefields around previous military fortifications prevented ground-truthing of these promontories. While serving as a complementary tool to terrestrial fieldwork, remote sensing remains ineffective as the initial prospection method.

Methods

RAP's recording methods relied on a combination of paper data entry forms, digital equivalents, and journal entries detailing the survey activities of the day. Beginning in 2014, we created a form with specific data dimensions to enable data uniformity, printed out for use in the field. The intent was to streamline the data collection process and enable other team members to survey independently. Prior to the 2016 season, I implemented a survey database, using Airtable, mirroring the fields and data collection types. A mobile app enabled the possibility of direct data collection and entry in the field, removing the additional step of entering the analog data online after the completion of surveying. Unfortunately, the limited mobile internet service and required connection to Airtable's servers led to inconsistent use of digital recording. Given the

advances in technology and connectivity since 2016, future seasons can use the fully digital recording process. The addition of excavation data to the survey database to create a "master" record makes digital-first data collection more effective and impactful, allowing for the lookup of existing data and input of different data types.

The available tools directly influenced the types of data recorded. Our primary method for recording the location of sites was a handheld GPS. The point number, stored on the GPS unit, was added as a data field for each site, with the exact coordinates recorded during laboratory analysis. In instances of sites with defined spatial limits or multiple points of interest, we recorded multiple GPS points, noting the significance or context of each point. For example, at Gund-i Topzawa, we recorded a point at each end of the furthest extent of visible architecture in the road cut. Maps of sites in the survey area use these GPS coordinates, selecting a single central point for sites with multiple recorded coordinates. Tape measures and pacing served as additional tools to estimate the size of sites or features when possible. We sketched features of interest on the paper recording form, when necessary, although photographs often provided a better reference.

Photographs of sites and their environs served as the most valuable data source for understanding and reconstructing the landscape and site distribution in the Sidekan subdistrict. Each team member took photos on their respective devices, although I captured most images with a Nikon D3500 DSLR. Lab work, at the end of the day, categorized each photograph to its respective site and saved it in relevant folders. In addition, we experimented using UAV photography to record different perspectives of the sites and create 3-D photogrammetry models. 2014's season utilized a homemade

drone with an attached Canon "point and shoot," which failed almost immediately on takeoff. 2016 used a DJI Phantom 4 with an attached camera. We recorded only two sites, Qalat Mudjesir and Qalat Gali Zindan, using this technology. While the different perspective was useful for a broader perspective of the sites, the images did not reveal additional features or patterns in the visible material.

Artifacts associated with the sites, either ceramics or additional objects, were collected in bags, using the same recording system as the RAP excavations (Chapter 4), with survey specific bag numbers (ex. "SUR.1") used in lieu of the printed bag tag numbers from the excavation (ex. "1010"), although they were used equivalently. Like excavation recording, a bag's number has no significance with the context, and multiple bags may relate to one site. Each object type from a site had a unique bag number with associated object type information. Given the precision limits of the GPS, all ceramics from a site were collected into one bag. In instances where we desired additional spatial control, we created a new site designation number with associated contextual information and bags. The few sites with intensive pedestrian survey using transects noted the position of pottery using GPS points or collected pottery by its overall transect location. Given the limited collection of material, the spatial position is unanalyzed. Team members processed objects in the lab concurrently and with the same process as excavated material (Chapter 4).

In addition to the above data, the field recording forms had spaces for the surveying team to add additional information about sites. The field site type categorized sites by their visible taphonomic characteristics, for example, exposed architecture versus

a field scatter. However, site types were not mutually exclusive. The visible architecture of multiple sites suggested a modern or recent date but warranted documentation if that theory was incorrect or if future research intends to utilize that information. Three fields describe the sites' current condition: location, current land use, and visible architecture. The multiple dimensions provide different perspectives and aspects to add information regarding the visible features of the site. The "area" field resulted in extremely different data, as the drastically different types of sites yielded information that could not be easily compared across the survey. An additional field, not present on the form, was the "find method" – with options including construction, local led, pottery scatter, or already known, among others. Appendix B's Survey Gazetteer contains the full list of available information for each recorded site.

Site Descriptions

The following section describes pertinent details from all sites surveyed by RAP in the Sidekan sub-district (Figure 5.4). Overall, we recorded 43 individual sites over 15 days in RAP's three survey seasons, although multiple site designations (following the naming convention RAP##) are combined when appropriate. For example, the cluster of RAP sites around Mudjesir are discussed as one individual unit. As the methodology's site definition discussion alluded to, the raw number of sites documented is not necessarily representative of the underlying settlement pattern. In at least one instance, I individually recorded four sites named Melesheen, directly adjacent to one another, while a different surveyor would be valid in collecting all as one site of Melesheen. The report of sites discusses each distinct settlement locus as one unit, regardless of the designations

or subdivisions. The following sections detail each of the sub-areas in the Sidekan subdistrict, beginning with Mudjesir. The section includes resurveys of Boehmer's fieldwork and new survey activities, as well as information regarding RAP excavations at a Mudjesir field and Qalat Mudjesir. After data on Mudjesir and additional Boehmer resurveys, the following sections detail the sites by each sub-area: Sidekan, the eastern valleys, the Hawilan Basin, and the Old Road.

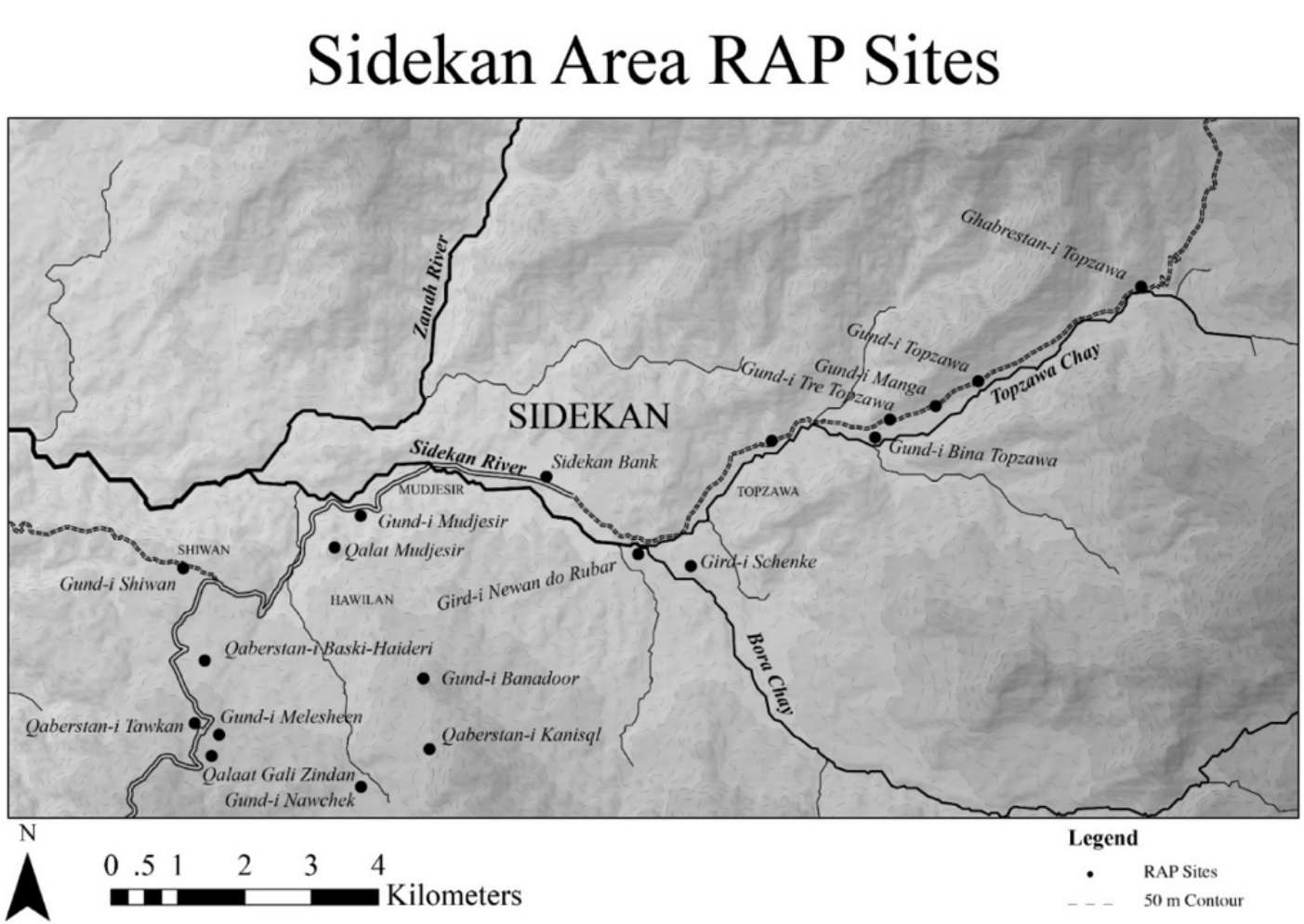


Figure 5.3: Sidekan Area RAP Survey Sites

Mudjesir: Boehmer Survey, RAP Survey & Excavation

Boehmer's survey of Mudjesir and other sites in the Sidekan subdistrict briefly surveyed part of Sidekan and Mudjesir in 1971, led to this area by the published existence of anthropomorphic stone stele and the known locations of the Topzawa and Kelishin stelae (al-Amin 1952; Boehmer and Fenner 1973). He returned in 1973 with his architect colleague, Fenner to fully survey Mudjesir and surrounding areas. Their survey around the village of Mudjesir in 1973 was extensive – tracing architectural features, collecting considerable pottery, and recording large stone artifacts. The overview of the pottery typology discussed much of his pottery from Mudjesir reported by Boehmer and organized into Urartian typologies by Kroll (Chapter 5). Boehmer's published ceramics from his 1973 survey aligns with the excavated material from Gund-i Topzawa and Mudjesir, indicating an Urartian Iron III occupation. Further surveys of the fields and hills around Mudjesir located additional sites, each recorded site representing loci of ceramics or architecture, some of which relate to areas of Boehmer's survey. The following section reintroduces Boehmer's work and expands on the detail from his primary 1973 report, with additional information about the known Mudjesir area sites gathered from RAP's survey of the area. At sites where the RAP site directly corresponds to Boehmer's original survey, the documentation describes the related material culture and surrounding landscape. Following is a section reporting on newly recorded sites by RAP around Mudjesir. Concluding the discussion of Mudjesir is a summary of unpublished RAP excavations at Mudjesir.

Boehmer Survey of Mudjesir

The most visible archaeological feature at Mudjesir is the site of Qalat Mudjesir, a hilltop stone structure located on one of the more prominent hills southwest of Mudjesir village. Boehmer documented 410 m of a partially preserved stone wall encircling about .93 hectares of the site (Figure 5.4). The outer wall comes to a point in the southern extent, where Boehmer believed a gate originally stood. At the site's center, elevated from the surrounding, was a central rectangular building with outer buttressing. In total, Boehmer and Fenner recorded 17 buttresses around this building. The walls were about 2.5 m thick, although the stone was barely raised above the surrounding surface. Not far from the central building, they noted a small fragment of a rectangular wall, paralleling the shape of the central building (Boehmer and Fenner 1973, 508–510). Returning in 2013, most of the walls Boehmer and Fenner described remained visible, but the site was covered in military trenches from its use as an encampment during the Iran-Iraq War. As noted above, the trenches obscured some of the walls in satellite imagery, but the areas of the site without military trenches continued to reveal the stone walls. In 2014, the geomagnetic survey by Jorg Fassbinder and his team from Bayerisches Landesamt für Denkmalpflege, Munich, confirmed Fenner's floorplan, identifying wall features in the locations previously mapped (Fassbinder 2016, 118). However, the other conclusions from the geomagnetic survey are suspect, as the quantity of metal shrapnel on the site created several false-positive signals from the magnetometer.

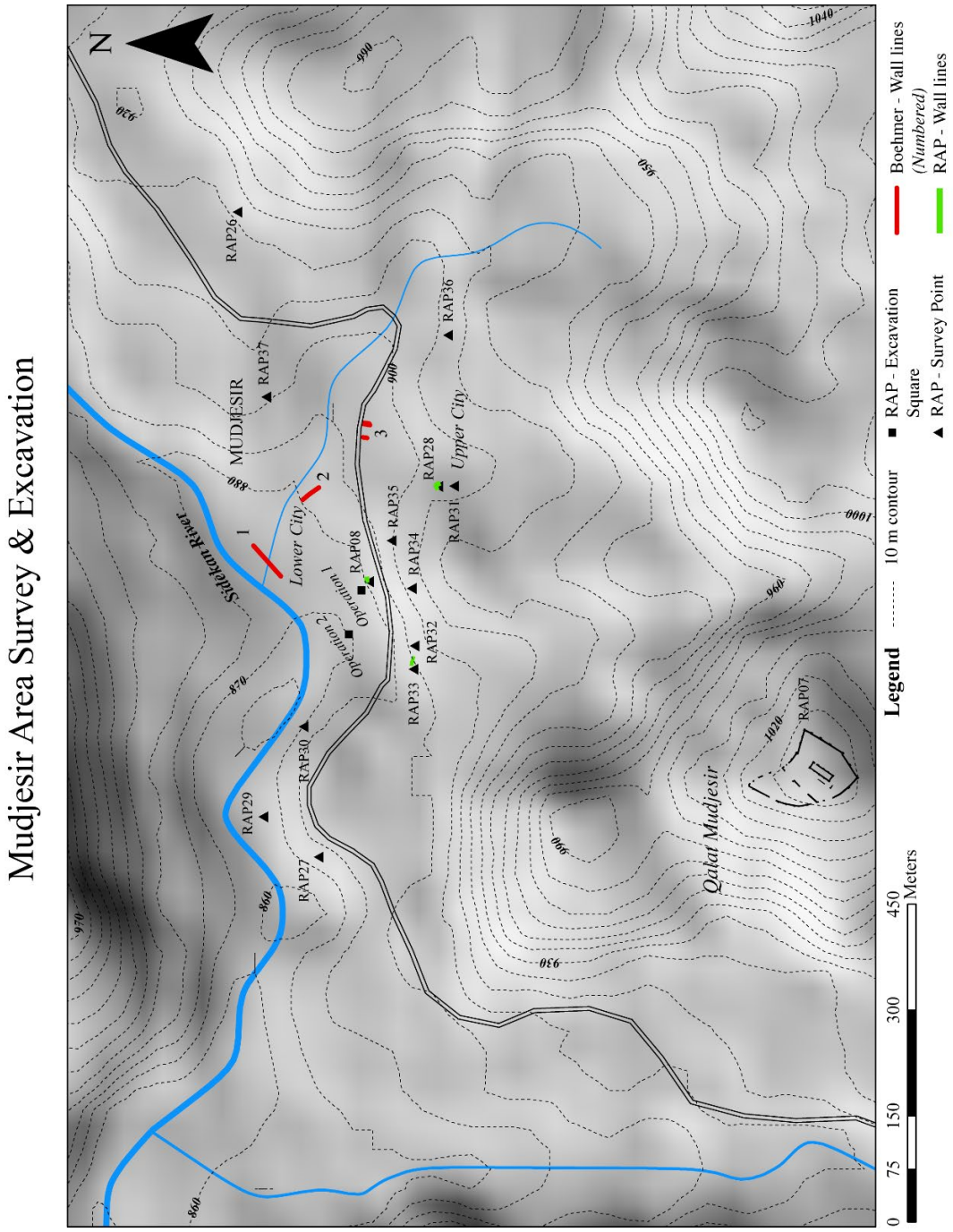


Figure 5.4: Mudjesir Area Sites. Boehmer and RAP Surveys

Boehmer's dating of Qalat Mudjesir relied almost exclusively on the architectural buttressing of the central building and stone construction techniques, comparable to

imperial Urartian structures. Their survey of the site's surface recovered only a few non-diagnostic sherds. While their ware was broadly similar to the many sherds located in the survey of Mudjesir, suggesting an 8th to 7th century BCE date, the forms of the vessels could not confirm that dating. The building's structure reinforced that date, showing clear connections to Urartian architecture from sites like Bastam, Zivistian Siah, and Kale Oglu, although those structures were individual buildings in larger fortress complexes (Boehmer and Fenner 1973, 510–512). The rectangular shape and buttressing, seen at monumental halls at those sites. Discussed further in the following Mudjesir Excavations section, Michael Danti's brief excavation of the central building did not confirm Boehmer's dating but provides little evidence against an Urartian or 8th to 7th century BCE date.

Along with the fortified site on the hill, Boehmer's survey recorded considerable stone architectural remains on the lower plain, adjacent to the river. He traced a significant wall in the area termed the "Lower City," the flat areas intermixed with fields and orchards. In the 2010s, this area exhibited similar characteristics of small fields intermixed with orchards or large trees. Directly south of the Sidekan River was the wall, up to 7 m tall in sections (Figure 5.4, Wall 1). Boehmer noted the upper phases were likely relatively recent, built upon older foundations not visible from the surface. The visible courses were constructed with large fieldstones, with each course of the stone wall laid perpendicularly, alternating with long and short length stones. In the exposed wall section, he noted two angular corners, raising the possibility of a gate here, before the wall ended in the west, with the eastern extent ending near a small stream by the village

buildings. Fragments of the walls continued around the village, facing the east (Figure 5.4, Wall 2) (Boehmer and Fenner 1973, 489–490). He gave no explanation for why the portion of the wall, directly facing the river, would have served as a gate. From the photographs in the publication, the type of stone construction resembled Gund-i Topzawa's walls, with the telltale friable slate and alternating perpendicular stone courses. While accessing this area of Mudjesir was somewhat difficult with overgrowth and significant bees from the residents' beehives, we recorded similar stone structures to what Boehmer described. Much like Boehmer noted, there was some pottery but far less than other areas of the site. However, the stone walls did not resemble fortifications, if due only to their narrowness, though the possibility exists of buried walls of greater width or that these walls were the foundation of wider features.

Boehmer followed the path of the wall, past the village's eastern extent, to the south, where the main Sidekan road cut the hillside going eastwards. He believed the wall continued southwards, cut perpendicularly by the road construction, before disappearing into the steep hillside to the south (Figure 5.4, Wall 3). The wall was 2 m wide in the road cut, built on top of bedrock, with an attached 1.4 m wide wall. Approximately 9.7 m separated these paired walls from a parallel 1.65 m wall. Surrounding these walls' eastern and western limits was stone, presumably bedrock (Boehmer and Fenner 1973, 490–491). The architectural drawing of these walls in Abb. 19 evokes immediate and apparent parallels to the road cut section that revealed Gund-i Topzawa's structure. Four decades of erosion obscured the material at Mudjesir, but the Gund-i Topzawa excavation establishes that these walls were not likely part of some city wall but a structure.

To the southwest was the raised area, surrounded by hills and adjacent to the road, Boehmer termed the "Upper City." While unable to detect a further extent of retaining wall (or city wall) that encircled the village, he recorded numerous wall fragments protruding from the surface, constructed with hewn stones, along with many sherds (Boehmer and Fenner 1973, 491). RAP's survey of this portion of Mudjesir in 2016 located a recent large hole, possibly from construction activities, filled with modern trash (RAP28). The walls visible in the hole revealed 4-6 courses of a wall on the southern face, with the top course approximately 50 cm below the surface. The wall was constructed in the characteristic alternating perpendicular stone courses seen at Mudjesir and in Gund-i Topzawa Building 1B-A. The wall appeared to run into a perpendicular section in the western balk, though it could not be traced further. The wall's corner may have been exposed in the east, or the hole cut a portion of the structure. Given the abundance of trash, we were unable to fully recover ceramics from the site, but we did record many fragments from what seemed to be a single large pithos, though it lacked any diagnostic features, as well as a single small rim sherd, possibly from a bowl (Plate 54.2). In addition, nearby was a somewhat recent stone structure (RAP31) that collapsed on the surface, likely from the last century (or more recent, if Boehmer's absence of recording was due to its non-existence). An earlier survey of this area in 2014, further uphill to the west, also noted a few wall fragments protruding from the surface and a single rim sherd (Plate 52.2).

Along with the architectural features at Mudjesir, Boehmer recorded two column bases in the village, an arrowhead, stone disc, stone bowl, and an oblong worked stone

with indention marks around its midsection, all from the area of the Lower City. Among the architectural features and movable artifacts were two column bases, one dated to the Urartian Period and one to the Hellenistic Period. The Urartian base was located below the surface of the village, with a diameter of .9 m, a height of .55 m, and a relatively simple rounded shape with an extended mid-section, made of limestone with a mortar hole at its top created by the villagers. The other was located just north of the village, near the outer retaining/city wall. It had a more elaborate design, with a bell-shaped base, incision, and rounded top, measuring .36 m tall and .64 diameter at its base (Boehmer and Fenner 1973, 491–492). Boehmer dated this base to the Achaemenid 4th century, given its distinctive style. While RAP may have recorded one of Boehmer's column bases in the village and an additional two further downstream (RAP30), Dlshad Marf's survey and overview of 17 column bases provide more extensive cataloging and connection to Boehmer's objects (Marf 2014, 15–18). His Figure 1, B records the column bases of RAP30. The column bases in his article are mainly similar to Boehmer's Urartian style, with two having two horizontal incisions that compare to a column base at the Urartian site of Altintepe. In addition, Boehmer noted the older, Ottoman-era fort in the center of the Mudjesir village, but did not describe any archaeological features. The building still stood at the time of RAP's surveys at Mudjesir and was used by the village residents.

RAP - Mudjesir Sites

A prominent cultural feature with continuity between RAP and Boehmer surveys is the sizeable modern road towards Sidekan. While the road seems to have been widened somewhat since the 1970s, Boehmer's mention of the road and a wall it cut emphasizes the importance of road cuts in locating archaeological material, a trait demonstrated again

with the Topzawa Valley road and Gund-i Topzawa. The 2016 survey and 2015 pottery collection of the road cut, concurrent with the Mudjesir field excavations, recorded multiple sites along the road cut. The delineation of the sites was largely arbitrary or reliant on small architectural or topographical features, as the whole Mudjesir area should be thought of as one coherent unit. However, the easternmost road cut site (RAP32), at the southwards bend of the road, had architectural features that warranted a unique site description. Between the road and the eroded hillside was a ditch running parallel to the road. This section of the ditch contained many stones in a similar pattern to the Gund-i Topzawa road cut. Delineating any walls was impossible given the low exposure and inability to clean the section, though we established the position of at least one wall with a high degree of certainty.

RAP32's diagnostic pottery establishes at least an Iron III date, with an outside chance of later occupation. Four of the diagnostic rims were from bowls that connect to the Gund-i Topzawa typology. One of the bowls (Plate 55.2) is included in the GT typology Bowl 12, straight-sided with everted rims and connects to Kroll type 13a, an 8th-century form. Another (Plate 55.3) was a carinated shallow bowl with a simple rim comparable to GT Bowl 7, primarily found in Building 1-W Phase B Room 1 and common in the 8th and 7th centuries. Another carinated shallow bowl (Plate 55.5) with a thicker body (Plate 55.3) relates to GT Bowl 11b, a type of carinated bowl found in Rooms 1 and 2 in Building 1-W Phase B.

Another bowl (Plate 55.4) compares to Bowl 13, related to Kroll's type 22. While not a perfect match with Kroll 22, he describes that type as mainly Achaemenid through

Parthian periods, though its style was common at Urartian era sites, including Hasanlu IIIA, Godin Tepe II, and even Mudjesir, sherd #4 in his Boehmer's 1973 publication. The related material at RAP32 and the date of sites with comparable sherds suggest this sherd was not from the Achaemenid Period. Another sherd (Plate 55.7) compares to Kroll type 25, which he dates as Late Urartian through Achaemenid. Like type 22, comparanda were from Urartian era sites like Hasanlu IIIA and Bastam B, as well as Hasanlu IIIB. This pair of sherds may not necessarily establish an Achaemenid date for this site, but rather a Late Urartian dating, consistent with Iron III.

RAP32 was the sole Mudjesir area survey site with a non-ceramic artifact. The object was one of the most intriguing artifacts recovered from either survey or excavation. It was a collection of viscous, burnt material that appeared to be slag from metal production. Given the constraints of fieldwork, we could not examine it in sufficient detail to understand the metallurgical characteristics of the object or if it was slag from metal products rather than burnt material from an unintentional fire. However, the surrounding area and walls did not show any of the tell-tale signs of large-scale burning like that at Gund-i Topzawa, providing circumstantial evidence the slag was associated with metal production. If so, it raises the possibility of metal production in the central area of Muṣaṣir. Along with the slag was a 17 cm long flat worked stone, made of a sandstone-like stone. One end was slightly pointed, and its flat surface had a pair of small divots, ca. 2.4 cm in diameter. The purpose of the stone is unknown, but its general form does compare to a similar stone from Gund-i Topzawa Building 1-W Phase B,

Room 3, with an equally uncertain purpose. These objects suggest, however, that RAP32 served some industrial or production function.

RAP33 was located a few meters further east along the road cut and referred to the collection of pottery that eroded from the escarpment, roughly an area 10 m wide and 15 m up the hillside. Most of the pottery was collected directly after a large rainfall in which some wall-like features between bedrock outcroppings were visible but not recorded or photographed. The relatively significant quantity of pottery, however, does assist in establishing the chronology of occupation in this area of Mudjesir. Twenty out of the thirty diagnostic sherds were included in the publication and analysis of the Mudjesir excavations by Danti and Ashby (Forthcoming). The full index of sherds and relationships to the Sidekan ceramic typology is in the Appendix. Overall, the assemblage resembles the fill of the Mudjesir excavation above the drain, dating to the Middle Iron Age/Iron III with continuity to the broader Urartian assemblage. Of the thirty diagnostics, twenty-two connect to the Gund-i Topzawa ceramic types, as noted in the Appendix.

RAP34 was further east along the road cut, roughly 10 m from the RAP 33 collection area, and yielded one diagnostic sherd. The sherd was an orange ware, and while it did not perfectly fall into a Gund-i Topzawa type, it has some resemblance to HM type 1, and its appearance is typical of Iron III. RAP35 was ca. 10 m east on the road cut and was also just a collection of pottery emanating from the eroding section. Of the five diagnostic sherds, two clearly connect to Gund-i Topzawa, one has parallels to that material while lacking an exact match, and one has no match from that site but is typical of Iron II/Iron III. The two bowls, (Plates 57.4, 57.3) fall into the Bowl 1a type from

Gund-i Topzawa 1-W Phase B, deep carinated bowls with out-turned rims, which match to Kroll's type 24, a 7th century and later form. Among the many sites with that type is Boehmer's Mudjesir survey (nos. 5, 60, 63). Another of the sherds from RAP35 (Plate 57.3) has a rim that could compare to Bowl 4 or Jar 3a from Gund-i Topzawa, another datum of evidence for an 8th or 7th-century date for the assemblage. While divided into different sites during survey and collection, RAP32 – RAP35 are best conceptualized as one site with the individual RAP site numbers delineating collection units.

RAP36 was also on the Mudjesir road cut, but further east, past the road's southward bend over the small creek, uphill on a small path leading up to the top of the adjacent hill. From the reconstruction of Boehmer's map, it seems to be almost directly uphill from the parallel triplet of walls in the road cut Boehmer noted. Despite the amount of erosion, we recovered pottery from only a small area and could not locate any architectural features in the exposed areas of the hillside. Overall, the pottery assemblage corresponds to the rest of the Mudjesir survey pottery, excavation material, as well as ceramics from Building 1-W Phase B. RAP36 was the only survey site to have a cup rim, which unfortunately did not have any match to any Gund-i Topzawa material, likely due to the paucity of cups at that site. Three sherds (Plates 58.1, 58.4, 58.6) related to GT types HM 2a, Jar 4, and Bowl 2b, respectively. Notably, Jar 4's only example from Gund-i Topzawa was from the space between Building 1-W Phase B and 2-W, believed to be contemporary with 1-W Phase B but with uncertain dating. Jar 4, however, does Kroll's type 49, which he dates to the 8th through 7th centuries. Two other sherds (Plates 58.2, 58.3) do not have direct parallels in the GT assemblage or Kroll types but broadly

share the ware and form characteristics common in Iron III, specifically the modeled rim of SUR.9.4. Despite the short distance from the rest of the road cut sites, the pottery at RAP36 suggests the occupation here was roughly contemporary with that area.

Two additional sites were not directly along the road cut, but earth-moving activity associated with the road constructed likely deposited the material at its present location from its original location near the road. RAP27 was a collection of ten sherds, only one diagnostic, mainly made from the orange wear common across Mudjesir. The one diagnostic sherd was an orange ware body sherd with a modeled and angular band. This detail was insufficient for exact dating but matched individual stylistic additions for Iron II/III pottery in the region. The sherds were on the hillside, ca. 30 m below the road, where the modern road curves around the small, raised a bit of topography that delimits the western edge of Mudjesir. In antiquity, this hill would have served as a natural barrier for anyone entering from the west. A few stones were visible in the section, but there was insufficient evidence to interpret these as architectural features. RAP29 had a similar small collection of pottery (8 sherds) with one diagnostic lacking sufficient detail for dating. The wares of these sherds match those of RAP29. The collection of this material was at the hillside base, alongside a small path running parallel to the Sidekan River. Like RAP27, several large stones extended from the hillside, but provided no evidence of architecture.

RAP recorded one additional site at Mudjesir, RAP26, some distance to the east – past the village, the "Upper City," and the bend in the road. The orchard owner of the fields that span the area between the Sidekan-Mudjesir road and the steep hillside to the

south led us to this location. Despite the report of archaeological material in this area, the semi-intensive survey of the hillsides recovered only a collection of very small sherds – with far more resemblance to pebbles than pottery. Most were revealed only after disturbing the soil around the orchard's trees, and none were immediately visible on the surface when walking through the area. The surface, however, was heavily overgrown and covered with foliage at least 20-30 cm tall. None of these small fragments were diagnostic or preserved well enough to make any conclusions about their dating or other characteristics. Survey of this hillside can only indicate the likelihood of archaeological occupation, but we were unable to ascertain if it was contemporary to the rest of the observed material at Mudjesir. In addition, 2016's survey of the hillsides north of the Sidekan River and Abdulwahab Suleiman's independent survey of that area located no archaeological features or artifacts, even with the somewhat recent road cut providing a clear section to search for material. The thin topsoil above the bedrock likely either prevented occupation or wiped away any remains post-depositionally. We currently have no way of determining if this northern slope had a similar lack of topsoil in the first millennium BCE.

A notable point in concluding the survey of Mudjesir was the absence of distinct Achaemenid ceramics. Boehmer's record of a stylistically unique Achaemenid column base (Abb. 22) was the only Achaemenid artifact, and its monumentality indicates some type of Achaemenid occupation, as column bases are traditionally non-movable objects. RAP's excavations of Gund-i Topzawa and Ghabrestan-i Topzawa established Achaemenid burials in the region during that time, and the quality of burial goods

suggests at least somewhat elevated status for these deceased people. Further intensive survey of Mudjesir can shed insights into the status of any potential Achaemenid occupation – whether it existed at all or later taphonomic processes wiped away the more recent phases.

The ceramics from the RAP survey and excavation of Mudjesir reinforce Boehmer's conclusions that the ceramics bear far more resemblance to Urartian styles than Assyrian types. Further, the combination of the excavation of the Mudjesir field, Qalat Mudjesir's recent survey and excavation, and the survey of the area around Mudjesir provided no evidence that would refute Boehmer's overall postulation as Mudjesir as Muṣaṣir (Boehmer and Fenner 1973, 512–514). However, two of Boehmer's points, the defensibility of Qalat Mudjesir and the direction of Sargon's invasion, are possibly incorrect given data produced through this archaeological research and historical reconstructions after Boehmer's publication, discussed in detail in Chapter 7.

RAP – Mudjesir Excavations

In 2015, Soran Director of Antiquities Abdulwahab Suleiman permitted RAP to conduct two test soundings in the fields of Mudjesir, followed by a short investigation of Qalat Mudjesir by Dr. Danti in 2019 (Danti and Ashby Forthcoming). The previous season, 2014, Jörg Fassbinder (Ludwig-Maximilians-Universität München) and his team conducted a geomagnetic survey of Mudjesir and Qalat Mudjesir as part of the larger RAP project (Fassbinder 2016). The excavations and geomagnetic survey, combined with the pedestrian survey results, provide a broad dataset of ceramics as well as insights into the nature of the buried architecture.

The geomagnetic survey at Mudjesir's fields (Boehmer's "Lower City") covered a combined area of about 40 x 60 m. As part of the preparation of the area for geomagnetic survey, we removed many pieces of metal shrapnel, including large munitions. The quantity and type of metal support the local informants' information about grading of the site for a military emplacement at the location during the Iran-Iraq War. The 2015 excavations dug through large quantities of metal shrapnel in the topsoil and the highest stratigraphic levels, and further survey on the site collected further metals, suggesting the magnetic signatures may have been artificially altered. Even access to the full 40m x 60 m area was largely constrained by a series of fences and, most disruptively, a beehive. These disturbances limited the magnetometer survey to two areas in the full grid. Mudjesir's metal shrapnel undoubtedly affected the accuracy of the geomagnetic survey, but the results "showed several rectangular pits, filled with highly magnetic debris, and on the other hand faint traces of several rectangular constructions. The latter are interpreted as the ground plans of at least three buildings while the former may be cellars or storage pits carved into the bedrock" (Fassbinder 2016, 118). Given the amount of metal buried directly below the surface revealed in the excavation, the cellars or storage pits may likely be false signals from the metals' magnetic signature. However, the road or linear feature may correspond to buried architecture. In addition, the geomagnetic team surveyed Qalat Mudjesir, discussed below.

With the substantial evidence of archaeological occupation and suggestive evidence for Ḫaldi's temple at Mudjesir, the team laid down two small soundings (Operations 1 & 2). The 2015 season at Mudjesir lasted approximately a week (October

27 – November 2) and had to battle the heavy rains characteristic of early fall in Sidekan (Danti and Ashby Forthcoming, 14). Operation 1 began as a 2 m x 2 m sounding on a small prominence in the southeast corner of the field, near where Fassbinder located an area of high geomagnetic resistance. Unfortunately, the exact mapping point in 2014 was lost, so the team was unable to place the trench exactly on the geomagnetic anomaly. We placed Operation 2 northwest of Operation 1, near the edge of the field where column bases and other construction material were supposedly located, but the operation was abandoned after only two days, largely due to intemperate weather. Given the archaeological material's concentration at the outer edge of the plowed field, seasons of plowing operations and field leveling likely pushed material to the side. Operation 2's excavation only dug approximately 50 cm – 75 cm below the surface but uncovered a collection of stones laid out in a wall-like pattern. They apparently consisted of five stones in a line, running diagonally through the trench from southeast to northwest. To the east of the wall was a large amount of charcoal and ash, along with a number of pithoi fragments. This area of the trench was a small piece of green glazed pottery and a nicely preserved copper-alloy bracelet, with two flattened ends forming the opening. While the bracelet has superficial similarities to the far better preserved one at Ghaberstan-i Topzawa, the corrosion makes a confident identification difficult. Despite the low depth of excavation, the pottery and artifact preservation show no clear signs of disturbance by plowing or similar surface operations.

Operation 1 revealed a large stone drain at the bottom of the 2015 excavation (Danti and Ashby Forthcoming, 15–16, Figure 7a, 7b). The first 2 m of the excavation

consisted of a single layer of stone chips with large fragments of animal bones, numerous sherds, and fragments of baked brick. Apart from one orange ware sherd with matte-black parallel painted lines, the entirety of the ceramic assemblage in the fill consisted of Iron III pottery comparable to the Gund-i Topzawa assemblage (Danti and Ashby Forthcoming, 19). At the bottom of this layer was a clay surface, covering a horizontal drain below. Removal of flat stones covering the drain uncovered a channel approximately 70 cm wide and 75 cm deep, measured from the removed stone above. The drain's side walls were two stones wide. The eastern wall consisted of four-courses of river cobbles and three courses of river stones with smaller stones on the west. The drain's cover was paved with rectangular stones and rounded cobbles. The stone structure slopes downwards from south to north towards the river. Of the exposed 1.7 m, the elevation of the drain's floor dropped 44 cm, a slope of 26% (Danti and Ashby Forthcoming, 16). Looking south, through the open area of the drain, under unexcavated areas above, the team saw the drain running below what appears to be a large stone wall running perpendicularly.

In the fill of the drain were striated layers of organic material with small sherds, bones, and a single piece of charcoal. The sample returned an uncalibrated ^{14}C Age ($\pm 1\sigma$) of 2719 ± 24 ^{14}C years BP equating to a calibrated date range of 895 – 833 BCE(68%),[85] the Iron II Period (Brock Ramsey 2017; Reimer and et al. 2013). Continuing usage of the drain, with water and other refuse flowing through, would wipe away the charcoal from its location, indicating the charcoal dates near the end of the building's use. Returning to

[85] 68% confidence. 910-815 BCE 95% confidence.

the existence of the large level of stone chippings and the hypothesis that the chippings are some sort of leveling operation, a narrative emerges. The drain and the associated building seen in the excavation were leveled between 895-833 BCE, and a new structure, likely containing the column bases that litter the modern surface, was built on top of the old structure.

The monumental nature of the drain, combined with the large nearby wall, lends credence to the idea of a large monumental structure, like the Ḫaldi temple. Fassbinder's ancient road loosely corresponds with the direction of the drain, which could indicate at least 10-15 m of the remaining drain. Unfortunately, the misalignment of the 2014 and 2015 mapping cannot confirm this accurately, and the gap in the magnetometer grid perfectly misses the suspected area of the monumental building. The 2 m of stone chips are unique for the homogeneity and depth, as well as the distinct combination of stone with archaeological material. One theory is these chips were a deliberate fill to create a platform above. In the Muṣaṣir relief, the temple appears to rest on a large base or platform that is conceivably made of stone chippings. Other roughly contemporary sites used construction techniques that may resemble this type of platform. At Gordion, the Terrace Building Complex, an Early Phrygian structure destroyed ca. 800 B.C.E., rests upon a thick layer of stone fill. The rubble consists of 4 m of large stones, seemingly quarried for that purpose, covering a much earlier Early Bronze Age structure, dating as far back as the third millennium B.C.E. The purpose of the rubble was apparently to create a large, flat platform, extending the limits of the main citadel mound (Rose, Brian C. 2017, 155–157). Another site's large terrace may provide further evidence, although

its fill was not filled with as much stone as Gordion. At Persepolis, a façade of masonry blocks creates the foundation for a large terrace that holds many of the important buildings at the Achaemenid capital. In order to level the surface, the area inside the surrounding retaining wall was leveled. At some points, this meant scarping the exposed bedrock and adding those stone chippings to the lower sections (Schmidt 1953, 61). Further, at an Urartian site, Ayanis, a series of pillars surrounding a building were constructed on a layer of stones, not unlike that at Mudjesir. The builders placed a collection of stones around the exposed rocks, then "a layer of thick pebbles between the two," creating a strong, flat bed for the pillar's construction (Bilge 2012, 2–3).

In October 2019, Dr. Michael Danti returned to Mudjesir and was given permission by Abdulwahab Soleiman and the Soran Directorate of Antiquities to excavate a portion of Qalat Mudjesir's central building and Inner and Outer Baileys. Over two weeks, he traced the outline of a buttressed corner of the Central Building, located its doorway, and cleared a small portion of the structure's interior. A sounding was also completed in the Outer Bailey in an area that geomagnetic mapping indicated probably contained pits and/or midden deposits. The doorway in the eastern wall of the Central Building, off-center near the northern wall, was constructed with six large baked bricks, a style far more common in Assyrian monumental structures than those excavated at Urartian sites in Turkey, Iran, and Armenia. The stone walls had large, flat blocks on both faces, with stone rubble filling in the space between the exterior faces. Overall, the outer stone walls matched Fenner's plan and the geomagnetic mapping of the building, with the wall gap in Fenner's plan corresponding to the doorway. Deposits inside the

building indicated the structure had been destroyed in an extremely hot conflagration event, with ash and charcoal layers and an extremely hardened and discolored clay and natural bedrock surface— the original floor of the Central Building. Lumps of fire-hardened and discolored clay in the destruction deposit bore reed and grass impressions, indicating this material likely originated in the structure's roof surface. Radiocarbon dating of carbon from the building's interior —probably from roof beams used in the original construction—returned dates from the 9th century BCE. The small amount of diagnostic pottery from the structure's interior and from the Outer Bailey matches the Iron II/III pottery from the excavations and survey of Mudjesir. In addition, a later tanoor cut into the structure's wall, with Islamic Geruz Ware, indicating at least a minimal later occupation at the site (Danti, personal communication).

Additional Boehmer Site Resurveys

Boehmer's quick but thorough survey in Sidekan in the 1970s was instrumental in all of RAP's excavation and survey work. It established the existence of significant archaeological remains from the Iron Age and the variety of features in Sidekan. Our return to Sidekan, four decades later, required returning and resurveying Boehmer's sites, necessary for multiple reasons. One, determining the continuity or preservation of sites is of interest to survey analyses and cultural preservation questions. Second, the drastic improvement in mapping technology allowed us to provide specific locations and coordinates of the sites Boehmer placed on his hand-drawn maps. Third, seeing the context of sites Boehmer recorded, their position on the landscape, and surface features, helped train our eyes to recognize features that may correlate to archaeological remains.

Schkenne (RAP 19)

For the purposes of locating Muṣaṣir, Schkenne was one of the most interesting sites Boehmer surveyed during his brief trip. Before Boehmer's fieldwork in 1973, Lehmann-Haupt passed through the area, noting not just the Topzawa Stele but the so-called mound of Schkenne nearby (Lehmann-Haupt 1926). Given its proximity to the stele and ideal location on a promontory he believed was an archaeological mound, he proposed Schkenne as the location of Muṣaṣir. Prior to Boehmer's October 1973 survey, he made a short visit to the site in June 1971 (Boehmer and Fenner 1973). He recorded a small square building on the hilltop with a possibly newer wall further down the hill's slope. The outer stones were made of large blocks with smaller stones in the central structure. He postulated the lower wall might have served as a terrace in antiquity. However, the central building was much newer and prevented determination if an older building was below. The building's shape and related ceramics were comparable to Kaune-Sidekan, believed to be Nestorian from the preceding centuries. However, among the sherds were Iron Age Urartian types, including a bowl with handles and a holemouth jar common at Urartian sites in Iran, dating the lower structure to the 8th or 7th centuries BCE (Boehmer and Fenner 1973, 481–486). Despite the ceramics, Boehmer did not believe the location was either Muṣaṣir's palace or temple.

On June 17, 2014, I surveyed the site with RAP team members from LMU Munich and Dlshad Abdulmuttleb Mustafa from the Soran Directorate of Antiquities. Our time at the site was minimal, as the local landowner quickly came to request our quick departure from the site and was not amenable to archaeological work there because of his fields covering the site. In our brief time, we did observe the outer walls Boehmer

described on the lower slope of the hillside. The central building had a large hole in its center. However, the walls were not visible in that hole, but soil mounding in a generally square shape indicated their location. During the conversation with the landowner, he indicated that the building had belonged to an older woman and collapsed after her death. As the structure appeared to be the same that Boehmer noted, the story may describe the building's use before Boehmer's fieldwork. Despite the large hole in the mound's center, our team could not locate any ceramics in the hole or the surrounding slopes. Even without artifacts, the physical surrounding reinforces the ideal positioning of the site. From the top, one can see most of the area around the modern town of Sidekan, although not to Mudjesir or Qalat Mudjesir, and its location serves to manage access from the Topzawa and Bora Valleys, with steep slopes providing additional impediments against attacks. While neither Boehmer nor our team determined this as Muṣaṣir's temple or palace, any future work should attempt to lay down a small test trench to gather information about the buried architecture, chronology, and ceramic types.

Tell Bayin do Rubar/Gird-i Newan do Rubar (RAP 24)

Nearby Schkenne, at the peninsula between the Topzawa and Bora Rivers, was the site Boehmer recorded as Tell Bayin do Rubar. He noted stone walls protruding from the soil along the outer edges of the small mound but no other architectural features. The only ceramics recovered were a few body sherds with a vague resemblance to those from Kaune Sidekan. He was unable to date the site but noted its advantageous position, with viewsheds of the plain of Sidekan, views eastwards towards Topzawa, and steep sides down to the river below (Boehmer and Fenner 1973, 487–488).

Our team resurveyed the site on June 19, 2014, and observed the same walls Boehmer recorded, with some additional context. Like Schkenne, the same landowner quickly forced us to cease our site survey, although we had sufficient time to walk all of the small site. We noted walls sticking out from the north and south of the main mound, on the portions facing the steep drop to the river. One section of the narrow walkway-like earthen ramp to the mound had flat stones on the surface, resembling a deliberate pavement, but we could not investigate further. We recovered no ceramics. Boehmer noted that Tell Bayin do Rubar translated as "the mound between two rivers," but his recording may have relied too heavily on his Arab guide's interpretation. For one, *tell* is the Arabic term for a mound, rather than the Kurdish word *gird.* In addition, the landowner of the property described the site as Newan do Rubar, rather than Bayin do Rubar, although site names reinforce the importance of its location between the two rivers.

While Boehmer noted the strategic location of the site, he did not fully emphasize its defensive suitability. Reaching the mound itself, near the westernmost extent of the peninsula between the rivers, requires walking along a narrow ridge, almost 100 m long. The sides of this ridge are steep and lead towards the rivers on either side. Following the ridge to its westernmost extent was impossible, as it narrows significantly before the rivers join, making the mound extremely well protected. Walking towards the mound, one passes a large boulder on the right. The boulder had an acutely flat horizontal face that did not appear natural. There was, however, no marking or inscription. The width between this boulder and the other side of the path measured less than 10 m, raising the

possibility that a matching boulder may have originally stood in its place as either a constructed or natural gateway. If Mudjesir and Sidekan were the core of Muṣaṣir, this site and Schkenne, a short walk up the hill to the east, would surely have been occupied.

Other Boehmer sites, not resurveyed

Three of Boehmer's additional sites were not resurveyed during the RAP survey project, but our work in the area can provide additional insights and context. 750 m west of Sidekan on the road to Mudjesir was the small tell, with remnants of a small house from a recently deceased woman. The site was called Tell Schasiman after that woman's name. Previous to her residency there, the site was apparently called Tell Gefr (Michael Rainer Boehmer 1973, 488). Our survey in the area did not locate the mound or note any topographic feature like that Boehmer described, despite frequently traveling to the same area.

Boehmer also surveyed the abandoned village of Kaune Sidekan, located on the southern bank of the Sidekan River, 2 km west of Mudjesir. The village was on a flat plateau that he believed was not natural. Multiple buildings were visible, with portions of their corners and walls exposed under a mass of debris. He collected a variety of pottery from the site, including the tell-tale green glaze of Islamic Gerrus ware. Nearby the village was a boulder with an incised ram, likely made by the Nestorian residents of this village Lehmann-Haupt described as he passed through the area, leading to Boehmer's conclusion that the pottery assemblage was a Nestorian type (Boehmer and Fenner 1973, 517–521). While Nestorian is a religious denomination, not a periodization, Boehmer associated the Nestorian occupation with the residents of the area during Lehmann-

Haupt's survey more than a half-century earlier. In 2016 we drove to Kaune Sidekan and observed the same collapsed buildings Boehmer noted but did not have time to leave the vehicle to collect material or view the incised ram.

Boehmer also described a burial dolmen in the village of Huwela, a few kilometers south of Mudjesir. The single tomb had a stone covering about 1.1 m wide, 2.0 m long, and .37 m thick. During Boehmer's fieldwork, only about 1 m of the structure was above the ground, with a grouping of stones, largely obscured, creating an entrance. He noted that this type of stone dolmen structure is not known from Mesopotamia or the surrounding area but rather connects to the culture in northwest Iran (Boehmer and Fenner 1973, 515–516). He recovered two sherds contemporary to Mudjesir, dating to the 7th or 8th century BCE. We did not attempt to locate this site, but the excavation of Ghaberstan-i Topzawa demonstrated that this type of stone construction, while abnormal for Mesopotamia, was less unique in the Sidekan area.

Sidekan & The Topzawa Valley

As the eponymous seat of the Sidekan region, one expects the modern town of Sidekan to connect to significant archaeological remains. However, from the limited survey and discussion with town residents, the immediate area showed minimal cultural material from antiquity. Analysis of CORONA imagery from 1968 and 1969 of Sidekan's central plain shows the wide valley was devoid of any large or visible structures. Sidekan, at that time, was a small village to the east of the modern town, covering less than 3 hectares, directly adjacent to Gird-i Newan do Rubar. Less than a decade after the capture of CORONA imagery, Boehmer's survey of the area did not note

any archaeological sites in this area. He described, however, several new buildings, including a school next to a fortress (Boehmer and Fenner 1973, 517). Along the main road through modern Sidekan is a sizeable fortress-like building built on top of a tall mound or hill. Kurdish security forces occupied it, so we could not examine the structure, but Boehmer's fortress may refer to the same building. CORONA imagery from 1969 shows a small mound at the location in question, without a structure on its peak. Around that area, Boehmer recovered handmade decorated pottery that appeared contemporary to sherds from Kaune Sidekan, postulated as a late site, possibly occupied by Nestorians during Lehmann-Haupt's travel through the region (Boehmer and Fenner 1973, 517). The fortresses' existence prevents any archaeological reconnaissance or targeted excavations from determining if the feature was natural or archaeological.

As noted in the discussion of Sidekan Bank's excavation, that site contained minimal archaeological material, mainly consisting of large burning concentrations and few features, suggesting temporary or ephemeral occupation, unlike Mudjesir or Gund-i Topzawa. The intensive pedestrian transects of the surrounding hillsides between the river and the modern buildings along the road recovered almost no ceramics, and none had identifiable characteristics. In addition, recent construction nearby the original Sidekan village neatly sectioned a small, round mound. Despite its exterior resemblance as an archaeological mound, the section revealed its natural identity, with only one large pithos sunk into the surface and largely destroyed by the construction. That behavior is consistent with nomadic or temporary occupation, reinforcing this area's probable type of use. Unfortunately, RAP did not have an opportunity to survey the hillsides around the

Sidekan plain where, if paralleling Mudjesir and Gund-i Topzawa, we would expect permanent constructions.

One of the most crucial concentrations of sites in the Sidekan survey was along the Topzawa Valley, revealed by the road construction previously discussed in-depth with the Gund-i Topzawa and Ghaberstan-i Topzawa excavation sections. The road widening began just east of the older side of Sidekan, directly adjacent to Newan do Rubar. The construction exposed a length of approximately 8.5 km along the valley. Of that length, 3.8 km were intensively surveyed, examining the road cut's section for architectural features, burning, or concentrations of artifacts. The segment stretched from Gund-i Topzawa (RAP17) eastwards to RAP22 (discussed below), along with the section directly adjacent to Ghaberstan-i Topzawa (RAP16). The unsurveyed sections are between Gund-i Topzawa and Ghaberstan-i Topzawa, and the section spans the westernmost extent of the road east to RAP22. Frequent drives past these areas, however, noted the presence of possible archaeological material in the exposed sections.

In addition to the road cut, I surveyed other valley portions to determine if archaeological remains were visible on nearby surfaces and if occupation spanned into the valley floor. Apart from one site (RAP20) on the valley floor next to a dirt road with a mere three small and worn sherds, a pedestrian survey in the fields and southern hillsides of the valley noted no archaeological material. One of the small fields, directly south of Gund-i Topzawa, was intensively surveyed with transects by two team members, but we recorded no material. While thick vegetation obscured most of the ground during the summer survey season, even portions of bare soil did not reveal ceramics. Further, the

southern hillside, with a small dirt road, one lane across, had none of the archaeological characteristics as its wider twin across the river, to the north. A journey up one of these paths to a peak opposite Gund-i Topzawa noted the minimal topsoil remaining on most of the hillside and an arduous trek up the hillside. It remains possible buildings like Gund-i Topzawa existed on the southern slope, but the manner of discovery for the masses of architecture along the road cut presents a significantly biased dataset.

RAP recorded three sites along the road cut, in addition to Gund-i Topzawa and Ghaberstan-i Topzawa. The most intriguing of the three was Gund-i Manga (RAP23), less than a kilometer west of Gund-i Topzawa. Its section largely resembled the initial view of Gund-i Topzawa's section in 2012. The collection of walls and visible archaeological features spanned 160 m of the road cut. Perpendicular walls, cut by the road construction, jutted out into the road. These walls were all separated by ca. 3 m, with as many as three rooms visible. A layer of thick charcoal burning was 2 m below the surface, with a second layer 1.2 m below that top layer. Some stones rested directly above that lower charcoal layer, as well as large pottery fragments that our team extracted and recorded. Two of the walls formed an angle, like Room 1 at Gund-i Topzawa, seemingly perfectly paralleling that structure's architectural arrangement and burning pattern. Adjacent to these walls was an eroded portion of the hillside, a portion of which revealed a small hole. Looking through the gap revealed an open space with an intact stone roof of some sort. The opening was only a few cm wide and thus too narrow to investigate further. Still, the size of the space, at least 50 cm deep, drastically lowers the likelihood it formed accidentally during the building's collapse. A nearby farmer recounted how one

of his cows was grazing on the surface above the site and partially collapsed into the space, revealing its existence and causing him to block its access by his and other roaming animals. Hence the name of the site derives from the Kurdish word for cow (*manga*).

In addition, we recovered a moderate quantity of preserved pottery, including three large diagnostic rims with Iron II/III dates. One (Plate 53.3) was a large pithos, recovered among the burning, resembling at least one of the vessels from Gund-i Topzawa (Plates 44.2). Another was a rim fragment of a vessel at least 35 cm in diameter (Plate 53.1) sharing the chunky rims common at Gund-i Topzawa (Plate 44.3). Both sherds were made of similar low-fired orange ware, common at Gund-i Topzawa and Mudjesir. An additional sherd (Plate 53.3), had a comparable shape to GT Bowl 11b, although a black slip coated its surface. These sherds largely match the assemblage of Gund-i Topzawa, which, in addition to the parallel architecture and burn layers, suggest if not direct contemporaneity to Building 1-W Phase B at least similar Iron II/III periodization.

Further west down the road were two additional sites cut by the construction. Gund-i Tre Topzawa (RAP21) was located about 1 km further west from Gund-i Manga and exhibited similar architectural characteristics. Much like that site and Gund-i Topzawa, Gund-i Tre Topzawa had large walls constructed in similar alternating perpendicular layering of shale-like stones from the surrounding area. Bedrock outcroppings were visible between these walls, with some of the architecture resting upon the stone. A small section of a front wall, running parallel to the road, survived the

destruction, suggesting most of the building remained intact. One of the walls was laid out in the same angled manner as the triangular room in GT Building 1-W Phase B and Gund-i Manga, suggesting that architectural detail was common to the area. One of the structures measured about 10 m across, and the full limit of architecture spanned 120 m along the road cut. Unfortunately, while we collected pottery from the site, it was lost during processing. Notably, Gund-i Topzawa, Gund-i Manga, and Gund-i Tre Topzawa were all located, at least in part, underneath small modern vineyards, indicating a correlation between the soil and occupation locations.

A further 1.7 km down the road cut, past a bend in the road by a small valley on the northern side of Topzawa, was the final road cut site, Gund-i Bina Topzawa (RAP22). The surveyed portions of the road cuts contained multiple late (Islamic) graves a few cm below the topsoil with simple gravestones visible on the surface. Given the sensitive nature of the destruction of these graves, we did not record any of these graves as archaeological sites. However, Gund-i Bina Topzawa appeared to be an older archaeological site located below some of these Islamic-era graves. Unlike the previous road cut sites, the architecture was not cut perpendicularly by earthmovers. Rather, a long section of stone walls, with comparable construction to the sites further east, was exposed lengthwise. The visible section of the wall was about 8 m long. While the wall was about .5 m below the grave above, this construction was possibly a lower grave. Unfortunately, we did not recover any ceramics associated with the architecture to provide a date for this site.

While the pedestrian survey was limited to the Topzawa Valley, one day's vehicular survey traversed the length of the Bora Çay, running roughly parallel to the Topzawa Valley to the south. On the advice of local informants, we drove the headwaters of that stream, near the towering peaks of Zagros Mountains' *chaine magistrale.* While residents spoke of "large pottery" in this area, we noted no archaeological remains. However, the visit to this area showed that temporary pastoral occupation continues in these seasonally snow-covered, high-altitude regions. The vast area is perfectly suited for pastoralism as plentiful water from springs and snow runoff run between the rolling hills.

Hawilan Basin

Apart from Mudjesir and Topzawa, the other area of semi-intensive survey was in the Hawilan Basin, the high-altitude rolling hills on the northern slopes of Hasan Beg Mountain where the modern Sidekan road descends from its peak over the pass. Locals' information, information relayed to our team, as well as guidance to locations, led our survey of this area. The modern Sidekan Road leads southwards, hugging the western half of the valley as it descends towards Mudjesir, while another branch encircles the basin to the east. The eastern branch of the road runs along the base of Kijak Mountain, passing the village of Hawilan and joining the main road at Qalat Mudjesir. The middle of the valley had areas of heavy erosion where local guides described a road that used to run through this area – though it was not the primary transportation route, pre-modern travelers recorded entering Sidekan over this pass. Road cuts and erosion helped reveal many of the sites, while nearby residents discovered the remainder over the years. Notably, in one section adjacent to Gund-i Melesheen (discussed below), the pre-modern

road's path remains visible on satellite imagery. In areas where there was believed to be archaeological material, we – Abdulwahab and myself, along with a rotating crew of members from RAP and the Soran Department of Antiquities – engaged in semi-intensive pedestrian survey to locate any visible ceramics. That work led to a site with individual collection units for comparison of the pottery's spatial characteristics. We split our area survey between the central part of the basin at lower elevation and the mountainsides to the east. Overall, we recorded 16 RAP-designated sites, representing 11 named sites.

Melesheen (RAP48, 55-57)

Melesheen is located on the western end of the basin, a few hundred meters east of the modern Sidekan road. The only archaeological material was a large quantity of pottery field scatter, whose presence we were alerted to by nearby residents. The fields were heavily and recently plowed, with large boulders around the field boundaries indicating the high quantity of stone in the soil. Its elevation, almost 1300 m asl, about 500 m higher than Mudjesir, not only resulted in a different microclimate than the fields of Mudjesir and Sidekan but provided wide viewsheds of not just the Hawilan but Zaneh Basin to the north. Its elevation is similar to that of Gund-i Topzawa and the sites along the Topzawa Valley, but the difference in topography creates dramatically different settings.

Melesheen is the name of one area of archaeological material spread over multiple fields, collected as four distinct RAP site numbers, RAP48, 55-57. The purpose of the sub-division of the overall site into four discrete units was for greater spatial control of collected pottery to determine if each field contained different pottery from different

periods or varied types. The clear division between the fields enabled this collection method. While each site's field included at least ten sherds, only two of the site collection units (RAP55 & 56) contained sufficient diagnostic pottery for comparative analysis. Three of the collection units (RAP55-57) were directly adjacent fields, while the fourth (RAP48) was a few dozen meters to the east, separated by at least one other field.

The considerable quantity of pottery resulted in a total of 102 sherds and 12 diagnostic ceramics. Gund-i Topzawa's excavated Iron Age ceramic typology aided analysis of survey material from the previously discussed subareas of Mudjesir, Sidekan, and Topzawa. However, most sites in Hawilan Basin did not yield similar Iron Age pottery. Rather, Islamic pottery – referring to any period post-Sasanian, after the Islamic conquest through the Ottoman occupation – was the predominant ceramic assemblage in these areas. Unfortunately, the overall scholarship on the analysis of pottery from this nearly 1500 year period remains scanty. However, RAP's excavation of Gird-i Dasht's upper phases provides the best source of comparanda, dating to roughly the last 500 years. While Kyra Kaercher is currently publishing the Islamic phases of that site as part of her dissertation, the bulk of the material is unpublished and is referenced only through field notes.

Neither RAP48 nor RAP57 had significant diagnostic sherds for analysis, so the study of the ceramics is primarily limited to RAP55 & 56. All the sites contained pottery lined with bitumen, although many of those sherds lacked other diagnostic features. RAP48 had one diagnostic body sherd with distinct hatched incisions running horizontally. That sherd possibly dates to Islamic or Ottoman periods, while the

remaining wares of the site are broadly similar to the Gird-i Dasht assemblage. Overall, the three diagnostic sherds from RAP55 most closely resemble Iron Age material, although not of the styles seen at Mudjesir and Gund-i Topzawa. A large holemouth jar (Plate 65.1) with a diameter of 40 cm with a heavily decorated grooved and banded rim as well as a body with a gradual inward slope like a hemispherical bowl, although its size negates the possibility of use as a bowl. Kroll's type 69c, which he described as a storage jar, matches the overall form and rim decoration of the holemouth jar from RAP55. That type exists in only two sites in Kroll's typology – Godin Tepe Period II and Bastam NG (North Building). Another sherd (Plate 65.2) also seemingly dates to the Iron Age, with a highly modeled rim, likely part of a jar, orange ware, and an exterior black slip. The thick square rim and narrow neck are typical of vessels from the Late Bronze Age and Early Iron Age.

RAP56's pottery is significantly different from RAP55, most notably in the types of decoration on the sherds' bodies. The nine diagnostic sherds include three with body decoration. One body sherd (Plate 65.7) had a unique wavy grooved line below small crescent incisions forming a continuous latitudinal line around the vessel's body. The wavy line most closely resembles sherds from Gird-i Dasht[86] in a context that may date as far back as 800 CE. The other two body sherds were decorated with rope impressed designs, formed with a simple applique, and impressed divots at even spaces (Plate 65.5). Another comparanda also comes from Gird-i Dasht Operation 3, at nearly the same level. While the oldest date for that operation could be 800 CE, it may be as recent as 1200 CE.

[86] GD.3.6.5.144

The bulk of the remaining diagnostics are handles, including one with similar form and ware to those excavated at Gird-i Dasht Operation 1, a later period than that site's Operation 3. The analysis of these two fields, directly adjacent, divided by modern field divisions, does suggest different periods of occupation at nearby locations. RAP55 seems to be Iron Age or earlier, with a significantly different assemblage than that of the Islamic material of RAP56. Apart from establishing a greater chronological range in the area, it could suggest a replication of the pattern first observed at Gund-i Topzawa of so-called "horizontal stratigraphy" – the practice of occupying spaces adjacent to pre-existing structures rather than building upon the ruins of earlier occupation. A further survey of the entirety of fields around Melesheen and targeted excavations in the fields would provide insights into the type of archaeological occupation and whether the ceramics originated from these fields or locations uphill.

Qalat Gali Zindan (RAP 47)

Adjacent to Melesheen was the site of Qalat Gali Zindan. The site is a stone promontory to the east of those fields and was one of two sites mapped using UAV photography. While visually attractive, the aerial imagery and derived 3D model from photogrammetry provided little additional valuable information. Like Melesheen, we were alerted to the existence of this site and guided there by nearby residents. However, unlike Melesheen, the surface of Qalat Gali Zindan contained only seven sherds, and the two rim sherds lacked preservation for drawing. The wares of the collected ceramics are broadly similar to RAP48, with some similarity to RAP56. With Iron Age pottery, wares of Melesheen's RAP55 do not resemble those of Qalat Gali Zindan, circumstantially

suggesting an Islamic or Ottoman date for this elevated site. Wares as a proxy for chronology can be problematic when comparing across regions, except in cases of mass import or technological homogeneity, as the available clay for production significantly influences the colors of ceramics. However, when comparing wares at sites within 1 km of one another, they serve as far better proxies.

Despite the paucity of pottery, the primary reason for describing this as a site was the loose layout of stone structures along its long peak and an account by locals of structures previously located along this ridge. The local village's *mouktar* described an older home on top of the hill with a basement whose construction disturbed a "large stone" in the process. While details about the large stone were extremely limited, unsurprisingly given the time elapsed, the overall details are reminiscent of the stone stele that Boehmer discussed at Mudjesir and originally published by al-Amin (1952). Unfortunately, an intensive survey of the surface did not reveal any decorated or inscribed stones, although the slate stone that littered the surface has superficial similarities in form.

Ghabrestan-i Tawkan (RAP45-46)

Ghabrestan-i Tawkan was nearby to Melesheen as well, about 500 m to the northwest of the cluster of fields. The site's main feature was a relatively modern cemetery, with simple gravestones marking the tombs of the deceased and piles of stones forming rudimentary walls or barriers on the surface. The cemetery (RAP45) was on a small hill overlooking the entire basin, directly along a bend in the modern Sidekan Road where the road passes the barely visible original dirt path. A nearby *mouktar* led our team

to the site, who relayed a story of gravediggers, from 15 years ago,[87] digging through two large pots while digging a grave, the remnants of which were on the surface nearby. Thus the *Ghabrestan-i* in the site's name refers not to the archaeological material but the contemporary existence of a cemetery.

We recovered 27 sherds, mostly from the bodies of the pots mentioned above. Only two sherds were diagnostic, including one rim fragment from the large pots. The rim sherd originated from a vessel 55 cm in diameter, likely a pithos of some type with a large opening. Its rim incurves and thickens while the neck was decorated with a series of three grooved lines. Its orange ware is typical of the Iron Age sites in the area, and the rim decoration is reminiscent of Kroll type 43, although that form was a bowl. A pithos sherd from Gund-i Topzawa (Plate 44.1) has a similar grooved decoration, but its rim was thinned, flattened, and out-turned as opposed to this site's thickened and in-turned rim. This comparanda, along with the typically massive pithos size, suggests this vessel also originated in the Iron Age, possibly contemporary to Mudjesir and Gund-i Topzawa. In addition, slightly downslope of the modern cemetery was a collection of three sherds, believed to be associated with the large pots (RAP46).

Ghabrestan-i Baski-Haideri (RAP52-53)

The two RAP site designations that made up the named entity Ghabrestan-i Bask-i Haideri are separated by 300 m and were most likely not part of the same cultural locus. These two points were approximately 500 and 800 m to the north of Ghabrestan-i

[87] While we were told 15 years ago, the pottery and the breaks appeared far more recent than 15 years. We may have incorrectly recorded 15 years.

Tawkan and the New Sidekan Road. RAP52 gives the site its name. A collection of stones, some of which appeared to be rudimentary gravestones, jutted out from the surface of the site, a small hillock along a deep erosion cut. The local *mouktar* notified us that someone recently dug into the surface, possibly for looting, and found multiple intact pots. Examination of the hole revealed an intact stone ceiling of some sort in the hole, possibly archaeological or a recent tomb. The surface around the site was devoid of any vegetation, and only a thin layer of topsoil covered the stone bedrock below, suggesting the tomb partially cut the bedrock stone. No fragments of the aforementioned large pots remained, and our pottery collection included only five small, extremely worn, and unidentifiable sherds.

RAP53, 300 m to the south towards the New Sidekan Road, was a sloped field, recently plowed and harvested, with many sizable sherds strewn over the surface. The field measured approximately 100 x 60 m. In total, we recorded 115 sherds in the field, collected 20 for analysis, seven of which had identifiable characteristics. The 115 sherds recorded did not include all visible pottery in the field. Apart from the comparatively vast amount of pottery, the site had no other notable characteristics. Overall, the datable pottery was similar to material from the later phases of Gird-i Dasht, suggesting an Islamic or Ottoman date from at least the last five hundred years. Another sherd (Plate 63.8), with its rope decoration, matches the style of many sherds from Gird-i Dasht Operations 1 and 3. A sherd (Plate 63.6) with a different shape and unique incising, with two triangular bands filled in with decorations, partially resembles the style of a sherd from Melesheen (Plate 65.7) albeit with different designs. The sherd was seemingly

shaped into a disc, presumably after its original use, so it may originate before the bulk of the material at this site. A body sherd (not drawn) has a small and deep incision running alongside a raised band, matching a sherd from Hasanlu I in the Ilkhanid Period (Danti 2004, Figure 27.7). Another sherd (not drawn) with three small horizontal bands is of a soapy ware common to the Islamic Period and compares favorably to a sherd from Gird-i Dasht Operation 3.[88] The quantity of pottery, disturbed by the plowing on the surface, further reinforces this site's relatively late date.

RAP50, 51, 54

The collection of these three sites, unnamed apart from RAP54, Serpsilla, lacked notable characteristics or enough preserved pottery for dating. Serpsilla's exact location is unknown, as the sherd was collected while I recorded pottery at RAP53. Its location, however, was somewhere in the general area between RAP53 and 52. Of the six sherds collected at Serpsilla, only one had any identifiable characteristics but was not of sufficient detail to assist in dating the sherd or the site. The other two sites, RAP50 and RAP51, had few details of note. RAP50 was a large stone with a deep rounded impression, an apparent pestle. Ten small worn sherds were in tomato fields nearby but were undatable. RAP51 was a hilltop, 200 m south of RAP50, covered in large stones, believed to be natural. A small portion of the stones roughly resembled architecture, and the surrounding area yielded ten extremely worn sherd fragments, largely resembling a handful of pebbles. The notable characteristic of these two sites was their location nearby

[88] GD 3.6.5.144

one of the older dirt roads that led downslope to Mudjesir, today serving as a furrow for water and erosion.

Ghabesrstan-i Kanisql (RAP58)

In the hills about the modern village of Kazhak, at the western base of Kijak Mountain at the east of the Hawilan Basin, several local villagers led me, Allison Cuneo, and Abdulwahab Soleiman to a pair of tomb-like structures. Our time was short because we arrived late in the day, and darkness soon forced us to return to the village. The village of Kazhak is on the first turn-off from the modern Sidekan Road, coming from Soran, past the neighboring village of Tawkan. An old dirt path, used and possibly created by Saddam's forces during conflicts there, runs up Kijak Mountain to its peak, approximately 500 m above. About 800 m from Kazhak, along this path, were the two tombs, partially cut into the slope of the hill. The village residents knew of the tombs but described them literally as large intact rooms with big stones. Agricultural digging partially damaged the structure with a collapsed roof, which brought attention to both features. Their origin predated the memory of any living residents. Extensive foliage, including large trees and a thick layer of leaves covering the surface, surrounded the tombs, making a thorough examination of the ground for artifacts impossible.

While one of the tomb's roof had collapsed, the structures shared similar construction techniques. They were roughly circular, about 3 m in diameter, with large unworked stones serving as the base. Smaller stones were stacked on the upper portion of the walls, arranged perpendicular to the larger stones with their narrower edges towards the structure's interior. These small stones were held in place by pressure, creating a

dome. The collapsed tomb showed the small stones' underside as a roofing material. On one wall of the intact tomb was a small doorway, with a large stone lintel supported by unworked boulders. Less than a meter of the opening was accessible, with soil filling in the entrance to an indeterminate depth. Examination of the interior of the structure only revealed the construction method of the roof and the considerable stone debris on the surface. We believed the structure's floor was significantly lower, with post-depositional erosion from the hillside filling the sides and interior of the structure. We located no artifacts in the interior of the intact tomb or nearby either structure.

With no associated artifacts or skeletal remains around the stone features directly indicating the structure's possible use as a burial, the architecture and relative topographic positioning are the sole rationales for reconstructing the buildings as tombs. Despite the different roof construction, the general layout of Ghaberstan-i Topzawa, including its small unfilled area at the top of meters of fill, mirrors the layout of at least the intact Ghaberstan-i Kanisql structure. Given the small, preserved opening of the door and similar type of debris at Kanisql, this structure possibly went through the same process, with original burials far below and many layers of sedimentation. While we did not observe Ghaberstan-i Topzawa before the road construction sectioned its interior and destroyed whatever entrance may have existed to the south, the section indicated that the roof of that tomb was not visible in modern times. A quick and superficial comparison of the hillsides above Kanisql and Topzawa suggests a primary reason for this difference: the northern hillsides of the Topzawa Valley are almost completely deforested, while the

hillsides above Kansiql are lush with nearly complete tree coverage. More importantly, the Kanisql adjacent trees are more substantial, with deeper roots to prevent erosion.

In addition, one of the sites Boehmer briefly described in his 1970s survey, Huwela, provides an even more intriguing connection. Boehmer described that structure as a dolmen, thus believing it was a tomb of some sort. While the publication's photograph showed large, flat stone slabs covered its roof, the size, stone construction type, and possible entrance were similar to both Ghaberstan-i Kanisql structures (Boehmer and Fenner 1973, 515). Huwela's location, following Boehmer's description, was approximately 2.5 km from Ghaberstan-i Kanisql. Both locations were along the sloping lower hillsides of the hills that surround the Hawilan Basin. While not recovered directly next to the dolmen, Boehmer found two sherds of a similar type to the Mudjesir material, 8th or 7th century BCE, not far from that structure (Boehmer and Fenner 1973, 515). While those sherds were not sufficient to date Huwela, the parallel structures and proximity to Qalat Mudjesir could suggest all three tombs were contemporary to occupation at Mudjesir. Boehmer noted that dolmens of this type are not Mesopotamian and were previously unrecorded in this area. With the dual tombs of Ghaberstan-i Kanisql, the Sidekan area has four recorded dolmen-esque tombs, all in nearly identical positioning along the lower slopes of large hillsides. Future seasons will continue exploring areas of similar topography and slope and lay down small test trenches at the sites to establish their age and possibly contemporality to Ghaberstan-i Topzawa.

Gund-i Banadoor (RAP60), Qalaat Bard-i Baraki Seru (RAP61), Gund-i Nawchek (RAP59)

Along the eastern hillsides was Gund-i Banadoor, a collection of large, wide, stone walls hidden beneath the thick brush and heavy foliage of fall. The site was located ca. 1 km northwest of Ghaberstan-i Kanisql and ca. 1.5 km southeast of the modern village of Hawilan (believed to be the location of Boehmer's Huwela site). Like Ghaberstan-i Kanisql, our team was led to its location by the *mouktar* of the nearby village, who noted large walls predating the memory of any residents. Like Ghaberstan-i Kanisql and all of the sites at the base of Kijak Mountain, our arrival late in the day greatly constrained our time and recording ability at the site. The lateness in the day, the thick layer of leaves on the surface, and substantial trees around the area prevented a full mapping of the walls at the site or intensive survey of the ground for associated pottery. However, we noted some architectural details that provide intriguing facts for interpretation of the available data and further research.

The site consisted of multiple large walls with well-hewn stones averaging 50 cm in length, covered in moss. Only one course was visible above the surface, so we could not determine if the exposed walls served as the foundation of a taller structure or were merely the tops of much larger walls hidden below the surface. Circumstantially, the small entranceways of the structures at Ghaberstan-i Kanisql, in a similar topographic area, suggest the walls' foundation extended some distance below. In total, we identified seven seemingly distinct structures, although the division between these structures was unclear. Connecting to the large rectangular walls were two smaller circular structures, with at least superficially similarity to those at Ghaberstan-i Kanisql, including the collapsed stone roof. Satellite imagery from DigitalEYE and CORONA (DS1104) show

faint traces of what may be a roughly rectangular elevated area along the hillslope, corresponding in part to the visible and recorded walls from the survey activities. That area measured about 450 sq meters, a fairly sizable extent. While not directly comparable given the differences in topographic locations, the total area of Qalat Mudjesir equaled about 400 sq meters.

These walls' stone construction notably differed from the excavated structures at Gund-i Topzawa and Ghaberstan-i Topzawa. Both sites in Topzawa primarily used shale-like stone, the majority of which was unshaped. The natural breaks of that stone enabled the construction of walls as tall as two meters, observed at Gund-i Topzawa, without the requirement of forming blocks into rectangular shapes. Qalat Mudjesir's construction differed from the buildings in Topzawa (Danti Forthcoming). The 1 m walls of Qalat Mudjesir's central building used outer faces with somewhat hewn stones for the facing and filled the middle with large stone rubble, a common method of creating foundations or large fortification walls. The walls of Gund-i Banadoor, although only visible for a few centimeters above the surface, consisted of far larger stone blocks, often hewn on both sides and without rubble to fill in the gaps. Portions of the outer fortification wall of Qalat Mudjesir, downhill from the central excavated structure and jutting out from the slope surfaces, do resemble this construction, albeit generally with smaller-sized stone blocks. The architecture does little to date the site, but the width of the walls and possible similarities to Qalat Mudjesir's outer walls provide an intriguing connection. However, we did not note buttressing like that of Qalat Mudjesir's central building that served as

identification of Urartian architecture for Boehmer and Fenner's mapping of the surface features of that site.

Given the limited time at the site and nearly complete coverage of the surface in leaves and flora, our ceramic collection was limited to one fairly strange sherd. The ceramic is flat and thick, about 5 cm, with no rim or curving of any type, made in a coarse buff ware, smoothed on its exterior. The most notable feature was a raised band, about 1 cm tall and 3 cm wide, with distinct hatched or diamond-shaped impressions. While clearly a ceramic good of some type, it remains an open question if this artifact was even pottery, possibly serving as a tray, incense holder, a model structure, or some other type of ritual good. Locating comparanda for this object is difficult without knowledge of the body shape. In addition, the preserved section of the band is of such poor quality to limit identification of the pattern. Two styles, however, with superficial similarities are the honeycomb impressions common to the Sasanian Period and the diamond-stamped decoration of the Parthian period. Neither, however, serves as a perfect match. Like the site's overall architecture, the sherd provides an intriguing piece of evidence, but the available data do not permit any solid analysis of this site.

Two final sites in this area provided evidence of thriving occupation but lacked artifacts to indicate the nature of the original occupation. 200 m directly uphill of Gund-i Banadoor was a stone outcropping named Qalaat Bard-i Baraki Seru (RAP61). Local guides led us to the site, overlooking the entirety of the Hawilan Basin, including the new and old roads into Mudjesir, which could have served as a defensive position. However, we did not locate any artifacts at this location, and the extent of non-natural evidence was

a possible building built in a similar style to that of Gund-i Banadoor next to the natural outcropping. Further south, between the villages of Kazak and Tawkan, was Gund-i Nawchek (RAP59). While the survey of many of the sites in the eastern portion of the Hawilan Basin was constrained by limited time, our survey of Gund-i Nawchek was the pinnacle of that problem. Led, again, by locals to this area, we arrived with the sun already set below the surrounding mountains. While we picked up multiple sherds, we could not collect them or gather any information about this area other than the existence of sherds in this field.

Sidekan Old Road

The collection of sites along the Sidekan Old Road warrants a brief discussion, despite its separation from the bulk of the Sidekan area's material and locations in the Diana subdistrict. In many ways, the material culture's difference further demonstrates the divide between Sidekan and Soran. Traveling the actual route provided an element of phenomenology, giving a basic understanding of the difficulty and distance to reach Sidekan before modern paved road's construction (Tilley 2004, 2008). The first site was not necessarily a site, but the modern village of Shiwan (RAP49) that serves as the ending point of the Old Road before the route opens up into the wide Hawilan Basin. Its location, controlling the eastern access route into the Sidekan area, would surely have been important in antiquity, as it continued to be through the period of the Iran-Iraq war. However, the reason for terming this an archaeological site was the recovery of a fine bronze fibula from the village's *mouktar*, originally found on the nearby banks of the Sidekan River.

As the fibula was in the *mouktar's* possession for some time, he or the original prospector had cleaned and treated the object's surface, revealing the fine details often obscured in corroded excavated objects. While recovered in Shiwan, the fibula likely came from somewhere upstream or uphill, given its findspot along the river. Thus its identification reveals the periodization and type of occupation in Sidekan overall, not necessarily adjacent to Shiwan. Fortunately, the fibula's details are distinct and provide a clear connection to the typology and period of the object.

The fibula was made of a copper alloy (not analyzed in a lab setting), measuring 2.6 cm long, 3 cm wide, and 1.4 cm in height. The two arms were circular, and each had one band of molding near the base. An unattached spring was included with the fibula body, but we cannot confirm its provenance as originating from the same fibula. However, the latch was hand-shaped, a distinct feature of many fibulae. The arch was semi-circular and flattened at its top, with the top inscribed with two curved parallel lines and the outer edges formed into a flower-like shape. Two comparanda resemble the fibula. In the Adana Museum, one example shares the same overall shape, although decorated with embossed dots, unlike the Shiwan artifact (Ögun 1979, 183). Ögun connects the Adana Museum fibula to Blinkenberg's type IX/2, which commonly appears at Urartian sites. Another example is from Bastam, one of the Urartian settlements at that site (Kroll 1979, Figure 6.2). While none of Stronach's types perfectly match, the closest match is his Type II 2, "semicircular fibulae with riveted pin," that shares the same hand-shaped clasp but few other characteristics (1959, 187). The Bastam and Adana Museum examples as comparanda establish the fibula from Shiwan as a likely Urartian type,

corresponding well to the overall periodization of Sidekan and serving as the only elite metal good from the proposed core of Muṣaṣir.

Shiwan serves as the endpoint of the Old Road, but traversing the dirt path to the west and to the south revealed at least two archaeological sites of note. From Shiwan, the road follows the mountainside to the south of the Sidekan River for about 5 km before going downslope towards the bend in the river where the Nazar River joins to create the Barusk River. The hillsides of this stretch of road were heavily mined during the Iran-Iraq War, and warning signs indicate the continued presence of possible unexploded munitions, preventing any survey of that terrain. The river's bend is directly adjacent to a small ford connecting the road on the south and east of the Sidekan and Barusk Rivers, respectively, to the western bank, unconstrained by river crossing to reach the Diana Plain. However, at the river's bend is the village of Gund-i Kachi, ideally positioned to control access of roads and rivers. The eastern Old Sidekan Road joins the main north-south road between Diana and the upper reaches of the subdistrict on the western bank of the river. In addition, in antiquity, any goods shipped down the river would pass the location, although, given the low depth of much of the river, we would not expect any sizable vessel used for transportation. While the archaeological remains at this site were minimal, the location warrants examining the possible occupation there.

When arriving at the village, we met with village residents who directed us to areas that contained artifacts. The village's topography consisted of one large hill at the center of the village with homes on the southern slopes, fields to the northwest and southeast. We collected artifacts from two sections of the village, in the northwestern

fields and nearby the homes along the southern slopes. Holes placed around the village contained a few small sherds, but most of the recovered material was from intensive survey of the field. In total, we recorded 58 sherds, a large number of which were of the distinct orange ware, located near a concentration of red soil next to the fields. Despite the quantity of pottery, only two sherds had diagnostic features. Of those two, one's small size and poor preservation prevented any significant analysis. The only well-preserved sherd did not have any closely aligned match for its form, although a break on the rim could indicate the spot where a handle was originally attached. However, the ware, fine buff and smoothed, is often associated with Islamic pottery, as seen at Gird-i Dasht and some of the Hawilan Basin sites. That single detail cannot establish a date without a comparanda of the rim shape. In addition, we recovered a small flint 2.5 x 6 cm made of a soft, unidentified stone, such as limestone.

Across the Barusk River, about 1.8 km south of Gund-i Kachi, was the village of Gund-i Leremaq. The village was positioned directly alongside the modern paved section of the Old Sidekan Road adjacent to a small stream that flows down from the lower reaches of the Shakh Kiran Mountain into the Barusk River, 100 m below. The village homes surround the road and partially stretch down the upper hillsides of the small stream's gulley. Upon arriving at the site, the village *mouktar* led us to one of the terraced fields along the gulley and a preexisting hole containing pottery. In the exposed section of the hole was a half-meter layer of burning, superficially similar in appearance to the burn section layers at Sidekan Bank. We did not locate any stone or mudbrick architecture in the section. All 42 of the collected sherds originated in the hole or in the

fresh dirt nearby, and we did not have an opportunity to further survey the extent of the village.

Despite a similar quantity of overall sherds, Gund-i Leremaq's ceramic assemblage contained far more diagnostic pottery than its neighboring site upstream. Among the nine sherds with diagnostic characteristics were two that provide connections to the Islamic material at Gird-i Dasht. One (Plate 61.6) with a rope design on a raised band on the body, shares the same style of diagonal impressions to form the rope design as a sherd from Gird-i Dasht Operation 1 (1.4.2.129). Another, with notching around the rim similar but distinctly different than the rope design also finds a close comparanda at Gird-i Dasht, but in Operation 3 (3.6.1741). Among the diagnostic sherds were three handle fragments with a strap handle shape, with outer raised sides and impressions down the middle, narrowing as the handle extends. One sherd (Plate 61.9) had the addition of a small circular indentation at the handle base, similar to a Gird-i Dasht handle in Operation 3 (3.6.5) that also shares the narrowing strap handle shape. As a whole, the assemblage of Gund-i Leremaq resembles that of Gird-i Dasht, providing a fairly certain Islamic date, likely sometime post 1000 CE and before 1500 CE given the range of comparanda at Gird-i Dasht.

The similarities between Gund-i Leremaq and Gird-i Dasht ceramics reinforce this point along the road as the divide between the material culture of the Diana Plain and Sidekan, providing the unofficial limits of the Sidekan material culture. That sites in the Hawilan Basin had pottery aligning to that at Gird-i Dasht only further emphasizes the influence of the culture and did not reach too far into the reaches of the Sidekan region.

The remaining extent of the Old Sidekan Road parallels the Barusk River, hundreds of meters above the floor of the river valley, before descending into the northern hillsides of the Diana Plain. Our tracing of the path led to recording two small sites, RAP41 and 42. Neither site had much of note. RAP42 was a collection of tiny and worn field scatter at a hill overlooking the Diana Plain. RAP41 was directly uphill of the previously known site of Gird-i Dbora, near the top of the hill and road that led north along its spine. That site, adjacent to a small village, resulted in a collection of 20 sherds, including two handles. Neither handle had distinct features but did not resemble any of the Iron Age material from Sidekan. In addition, we recovered a pair of small horseshoes or iron boot heels, with four nail holes for attachments, measuring 4.1 cm long and 5.9 cm wide. Accompanying the pair of horseshoes was a 9.7 cm long iron nail. The heel plates were too small for a horse or even a small pony, suggesting their use for a boot or shoe of some kind. Their preservation did not indicate a date of more than a few centuries old.

Survey Conclusions

Overall, RAP's survey of sites in the Sidekan region revealed a relatively broad geographic range of sites from a somewhat limited selection of periods. Locating most sites relied on inherently biased prospection methods – local informant information and construction-related destruction. The process of depending on destruction, as a result of major construction projects or minor agricultural digging, enabled the recording of types of sites that we would have been otherwise unable to locate. However, the necessity of modern population presence for these types of discoveries inherently biases these sites towards areas with contemporary occupation. Particular subareas of Sidekan without

modern occupation evaded detection, presenting the possibly incorrect view of an absence of archaeological material. The absence of sites in locations cannot be a determinant in any analysis of this material. Instead, only the existence of sites and their analyzed artifacts are conducive for explaining regional patterns. The entire database of Sidekan area sites is not a comprehensive corpus of the archaeological material in the region, but the existing information reveals multiple interesting facts about the nature of settlement in this highland region.

Among the conclusions the survey dataset reveals is the extent and limit of Islamic material in Sidekan. While Islamic sites undoubtedly exist further east, as the Topzawa Valley contained disturbed graves from the most recent previous centuries, the recovered Islamic ceramics in Sidekan are limited to the western-most areas, specially Hawilan and the Old Sidekan Road. Further, not only does that area contain Islamic material, but the coherence to the typology at Gird-i Dasht indicates connections between the lowlands of the Diana Plain and the highlands of the Sidekan area during that time. Historical accounts of Islamic geographers (Chapter 2) describe occupation as far east as the Kelishin Pass, and further survey of Sidekan's valleys can reveal the nature of that occupation and the extent of material connections to the Gird-i Dasht assemblage.

As the inverse of the ceramic distribution of Islamic pottery in Sidekan, the Iron Age material from the excavated and surveyed sites has few connections to the assemblage of the Diana Plain. Further, the somewhat limited Iron Age ceramics from the Hawilan Basin and the Old Sidekan Road have fewer direct comparanda to the Iron II/III assemblage created from the Gund-i Topzawa and prevalent at Mudjesir. However, given

the relative paucity of Iron Age ceramics in Hawilan and the Old Sidekan Road, implications of this difference must wait on further research at the two major sites of Gund-i Banadoor and Ghaberstan-i Kanisql, possible Iron Age sites. In addition to the types and chronology of sites in Sidekan, the surveyed sites show a preponderance of stone construction, with no surveyed or excavated sites relying primarily on mudbrick as their construction method. As stone is prevalent in the area and easily quarried due to its friability, the residents' preference for the material is unsurprising. The locations of sites, while possibly biased by the find methods, demonstrate the inclination for settlement on the sloped outskirts of basins and valleys, likely leaving the most fertile land along level slopes and nearby water for agricultural production. The distribution of settlement in Sidekan reveals characteristics and dynamics about the growth and fall of Muṣaṣir in the Iron Age.

Chapter 6 : The Landscape and Settlement Patterns of the Sidekan Subdistrict

The mountainous Sidekan subdistrict, with its small valley floors suitable for agriculture surrounded by steep hillsides and mountains, lacks many of the natural characteristics that would pull precipitate large settlements. Without rare minerals and with only limited acreage of arable land, occupation of this region required catalyzing factors to lead to a population size sufficient to form a recognized political entity. Why occupants chose to live in the Sidekan subdistrict underlies many of the research questions. The objectives of this dissertation include determining the factors motivating settlement of the Sidekan subdistrict, understanding the chronological extent of occupation in the Sidekan subdistrict, and exploring why Muṣaṣir-era sites dominate the archaeological assemblage. One approach for understanding settlement motivations and determinants is settlement ecology, a theory that considers the relationships and interplay between human and environmental factors (Brannan and Birch 2017, 55). The Rowanduz Archaeological Program's (RAP) site survey and multiple excavations yielded a multi-scalar regional data source that, with the assistance of Neo-Assyrian and Urartian historical records concerning Muṣaṣir, provides an integrative data source for these analyses.

Settlement Ecology

Settlement ecology is a theoretical approach to studying settlement created in response to the research question of "why do people settle in a given place during a specific time and in a particular arrangement" (Kellet and Jones 2017a, 1). Glenn Davis Stone, in his foundational manuscript *Settlement Ecology: The Social and Spatial Organization of Kofyar Agriculture* (1996), developed a diachronic integrative approach borrowing anthropology, economics, geography, and ecology to answer those questions. Building off previous studies focusing on the spatial relationship of villages and farms (Stone 1992) and the ethnic dynamics of settlement abandonment (Stone 1993), his comprehensive book charts the decision factors underlying Kofyar settlements in Nigeria (Stone 1996). His research observed the expansion and migration of the Namu valley by the Kofyar agriculturalists, which led to modeling the interrelated factors that pushed and pulled settlements towards nucleation and dispersal. In promoting settlement ecology as the theoretical approach for this analysis, Stone built on a long lineage of scholars settling settlement. Later archaeological settlement ecology studies brought in tools like GIS to determine the spatial relationship between the landscape, cultural features, and social dynamics. As an integrative methodology utilizing the vast interdisciplinary research on settlement, agriculture, and spatial dynamics, the historical foundations of settlement ecology are central to operationalizing the theory.

Foundations of Settlement Ecology

The Geographers

Before Stone's contribution to settlement ecology, archaeologists and geographers had advanced a litany of varying reasons or theoretical frameworks to understand why people settled in given places. Among the theoretical forebearers were geographers like Johann Heinrich Von Thunen ([1826] 1966), Walter Christaller ([1933] 1966), and Ester Boserup (1965), who advanced the ideas of proximity-access, Central Place Theory, and population's effect on agricultural intensification, respectively.

In the 19th century, the emergence of the social sciences and the movement towards the scientific study of the quantifiable world led the geographer von Thunen to model the interplay of settlement, land use, and spatial distance ([1826] 1966). In the process of trying to better understand the value of land and rents for landowners in the early Industrial Revolution, he generated a mathematical model paralleling the spatial arrangement of land. He based his model on a theoretical single market town located in an idealized homogenous agricultural plain, where the marginal productivity of each plot of land is determined by the capability of the land minus transportation costs to transport goods to the central market. In von Thunen's model of the "isolated state," concentric rings representing progressively decreasing profitability emanate around the central market town. With the model's assumption of uniform fertility and a single market, the transportation costs to the center to the center dictate optimal land uses for each circle – the nearest engaging in most intensive cultivation, middle rings with forestry or rotating fallow, and ranching at the furthest extent (von Thunen 1966). Von Thunen's use of profit maximization and economic rent was imperfect but served as a simple proxy to

represent the many variables of agricultural productivity and demonstrate the principle that proximity to markets directly dictates land use in an observable and repeatable process.

While often dismissed as overly broad or nonrepresentative of the complicated dynamics of field use, von Thunen's findings highlighted the outsized importance of agricultural proximity that served as the foundation for Christaller's more dynamic principle of settlement geography, Central Place Theory. Like von Thunen, Christaller ([1933] 1966) created a hypothetical geographical model with nearly all variables held constant to evaluate the impact of changing relevant inputs. His model assumed terrain, transportation facilities, and population density are constants, with consumers accepting perfect competition and producers abandoning the motivation for excess profit. In contrast to von Thunen's isolated state, Christaller's model for Central Place Theory added additional markets on the idealized landscape as settlements of tiered sizes between villages and cities. The size of each settlement dictates the types of goods or services offered. Further, he represented the primary measure of cost with the maximization of time to reach markets. Markets and resources on the landscape serve as attractions for the settlers, using a simple model with a rudimentary weighting of features ([1933] 1966, 84-133).

Christaller's model resulted in his Central Place Theory, that central places serve as points of attraction that support outlying settlements through goods and services. Central functions "are produced and offered at a few necessarily central points in order to be consumed at many scatter points," e.g., towns and villages, where transportation can

provide those goods and services over longer ranges (Christaller [1933] 1966, 19–21). In an environment with constant terrain, the resulting pattern is an evenly distributed hierarchical system of towns and cities, with a hexagonal-shaped hinterland surrounding a settlement. Cities, with the largest markets and greatest capacity for goods and services, form hexagonal hinterlands between themselves and other cities. Towns and villages follow the same pattern, with smaller hexagonal hinterlands around each tier of settlement. This geometry relies on the market principle, where central places maximize the range of goods produced in order to optimally minimize transportation (Christaller [1933] 1966, 66–72). At the border of a city, the furthest distance from the central market, the cost of traveling to the city outweighs the value of the goods and services there. As the threshold required for producing a product rise, the border around the city increases, because the rise in transportation costs is outweighed by the higher costs of production at a closer settlement locus. Christaller's model can be mistaken as generalizing to the point of inaccuracy, but like von Thunen proximity access rings, the hexagonal and hierarchical structure serves to illustrate a single principle at play – the importance of markets and their positioning.

While Von Thunen and Chisholm's models differ in their emphasis on agrarian land use versus settlement placement, both operate on the same premise that effort is a constant in the pursuit of maximal productivity. In its simplest form, when taking effort as a fixed value (x), the combined effort of transportation (y) and effort of production (z) must equal total effort ($x = y + z$). An increase in effort required for transportation must be accompanied by a proportionate decrease in effort for production ($x = (y+1)+(z-1)$).

The geometric shapes of concentric circles and overlapping hexagons are the results of overlaying this mathematical theory on a hypothetical version of the real world. Transportation and distance form the foundation of settlement geography, but the early geographers' models did not account for dynamic effects of cultivation and population size.

Boserup (1965) sought to model the relationship between population growth and food production, manipulating the two variables of demographics and agricultural productivity. Precipitated in part by a rejection of the Malthusian view of fundamentally inelastic food production, implicitly reflected in the settlement models of von Thunen and Christaller, Boserup's model used the growth in population as the independent variable that affects the methods and intensity of agricultural activity (1965, 1). Like the previous geographers, the model held most factors constant, such as settlement pattern, to focus on the independent and dependent variables of interest, rather than trying to capture the myriad possible inputs related to agriculture. Another assumption of Boserup's model is the Law of Least Effort, that farmers will expend effort the minimal effort necessary to satisfy their needs (1965, 28-32). Use of the Law of Least effort is often critiqued as a Eurocentric view of a false dichotomy between work and leisure that ignores the cultural differences in the perception of effort and productivity or requires an external force to force surplus production (Morrison 1994, 130-31; Erickson 2006, 336). While valid criticisms of the underlying motivations, the model's necessary assumption of only producing required outputs enables a narrow focus on the relevant interplay between population and land use.

With population as the independent variable, Boserup's model predicts that a growth in population may lead to technological advances and increased intensification of the available land, moving from extensive to intensive cultivation (1965, 41-42). She used a simplified view of fallowing and intensification frequency, creating a single spectrum that spanned low effort extensive or high effort intensive cultivation (Boserup 1965, 15-18). When the rural population is low, farmers shift seasonal production between fields, fallowing the unused fields for multiple growing seasons. Those long periods of fallow result in highly productive land, with zero or minimal effort expended during the fallow seasons (Boserup 1965, 12). With increased population and a requirement for greater output, farmers decrease the fallow time of fields, with additional labor required to match or surpass the productivity of highly fallowed land. As population rises, the intensification of the land increases, resulting in a higher marginal labor cost to produce the same output. The resulting interaction can be displayed as a graphical representation of efficiency and population concentration (Boserup 1965, 23–55). Her model indicates productivity narrowly associated with agricultural output is negatively correlated with population growth but notes that associated population concentration and social organization may lead to second-order effects on the population more broadly (1965, 116-120).

The Settlement Archaeologists

Amidst the backdrop of geographers' growing and increasingly complex models, settlement archaeologists began utilizing some of that discipline's insights in order to better understand archaeological landscapes and settlement patterns. Willey's (1953) analysis of the Viru Valley in Peru used aerial photography to document over 300 site

locations and separate them into typologies, describing the distribution of types in different ecological zones. While lacking the quantitative rigor of some earlier geographers' economic models or studies by future settlement archaeologists, Willey's regional model was one of the first archaeological studies that emphasized the importance of spatial relationships between human features on the landscape. Not long after, Binford's (1964) propagation of statistical analysis for intra-site and regional archaeological analysis initiated a new wave of archaeologists adopting ecological tools and an accompanying quantitative rigor for the study of agrarian or hunter-gatherer settlement locations (Binford 1964; 1980; 1990; Deetz 1968; Whallon 1968; Ashmore 1981; Kelly 1983).

Following the greater utilization of statistical and quantitative tools for the descriptive analyses of archaeological settlement, scores of archaeologists used tools adopted from the fields of geography and ecology to understand the placement of archaeological sites. In parallel to the theories of proximity access propagated by von Thunen and Christaller, Vita-Finzi and Higgs (1970) introduced to archaeology the methodology of catchment analysis, studying the spatial relationship between sites, the "natural resources lying within the economic range of individual sites," and mobility (1970, 5). Combining the tenets of site catchment and central place theory, Flannery (1976) began by applying the methodology to the Etla Valley in Oaxaca, Mexico. His study described a series of steps for settlement growth, beginning near river fords, spreading symmetrically to daughter settlements before eventually filling in the interstitial space between existing settlements. Although using the basic principles of site

catchment, he pointed out the methodology's difficulty in the binary identification of agricultural vs. non-agricultural land and the reasons farmers may distribute fields in unorthodox patterns as disaster mitigation (Flannery 1976: 92). In a further effort to explain settlement patterning, Trigger (1981) analyzed subsistence availability, political institutions, technology, population, among other factors, as causal determinants of settlement location. Another study by Sanders included a far greater list of ecological determinants, like rainfall, zonal soil patching, temperature, among others, but all of these models failed to provide a system for prioritization or optimization of these variables (Hamond 1981; 1981).

These models do not fall prey but circle the dangerous trap of the axiom "correlation does not equal causation," implying correlations between the observed order and position of settlements to ecological or geographic factors. Flannery (1976, 162) acknowledged that these approaches to settlement patterns use a set of probabilistic "rules" in search of the original reasons for occupation. However, probabilistic rules alone cannot account for the multitude of factors that contribute to human behaviors and the difficulty of creating mathematical representations of those components. Stone points out causal issues of many of these models, problems of equifinality – arriving at the same end point or conclusion by many potential means – a common issue of archaeological models (Hodder and Orton 1976; Crumley 1979; Stone 1996, 7). He addressed the problem of equifinality and the concept of settlement rules, with many intersecting overriding factors leading to a shared final point (the observed pattern), by thinking of the priorities by "their varying strength" (Stone 1996, 8). This concept that many rules with

priorities of varying strengths contribute to the decision-making framework behind settlement locations formed the foundation of settlement ecology.

Theory of Settlement Ecology

Building on the intellectual scaffolding of the geographers and settlement archaeologists, Stone (1996) identified that each of the geographic and archaeological models influenced an aspect of settlement patterning and agrarian land use, with details of each interacting in dynamic and unexpected ways. His objectives in the study of the Kofyar people were to understand the mechanisms governing agrarian settlement patterns and attempt to predict and explain why people settled at a given time and place on the landscape. The pursuit of these questions led him to create the theory of settlement ecology. Among the many ideas operating in Stone's conception of settlement ecology was the idea of priorities of varying strengths, in that the many rules that govern settlement and agrarian land use push and pull with one another, resulting in often unexpected outcomes from a set of models (Stone 1996, 8).

The rules determining settlement patterning can include a near-infinite list of factors, but Stone utilized some of the foundational principles established by geographers like von Thunen, Christaller, and Boserup. Stone termed the transportation principle demonstrated in von Thunen and Christaller's models as "proximity access theory" – the key implication that closeness to an important feature on the landscape is preferable to distance to that feature (Stone 1996, 14). Despite that preference, other motivations or rules can override the benefits of proximity. For example, Boserup's theory of agricultural intensification is at odds with proximity access. As populations are drawn

closely to desirable fields because of proximity access, the effort required for progressively intense cultivation makes the land less desirable. Simultaneously, occupants are pulled elsewhere to the central places of Christaller's model, under the same laws of Central Place Theory – goods and services like labor markets, religious facilities, or defense exist at the concentrated settlement locus. The dynamic push and pull between settlement rules, reacting to past and present choices of populations, is the core ramification of the study.

Stone's focus on Kofyar agriculture led him to first lay out an agroecological overview of agricultural intensification, building on Boserup's idealized models with models of ecological adaptation, forming a rough model for what agrarian settlement systems *should* look like without the effect of historical and cultural factors (Stone 1996, 32–56). In observing the Kofyar, he observed how weak social factors originally drew residences together, while stronger factors, like improved soil elsewhere, led to dispersed settlements nearer to the advantageous agrarian landscape. Intensification further altered the importance of water for settlements, drawing the populace towards agriculturally superior soil (Stone 1996, 132–61). In illustrating the successive steps of the push and pull of settlement factors, he emphasizes that intensification is not a given. Rather, the populace makes choices between intensification and abandonment, where other "rules" like the social organization of labor contribute to the outcome (Stone 1996, 182).

In a rebuttal to some of the geographic principles at play, Stone showed that farmers' conception of proximity in traveling from their homestead to fields operates on a "threshold" model, where distances shorter than 700 m did not affect their willingness to

travel (1996, 132). Existing geographic proximity models calculated proximity as a continual spectrum where 100 m is closer and thus more preferable than 150 m. The addition of the real perception of distance allowed Stone's study to better understand the motivations behind farmers clustering into small, nucleated homesteads. In comparing the distribution of Kofyar farms and settlements with the idealized arrangement suggested by Boserup's agricultural model, he observed the farmers do not act as her intensification model suggested. Rather the Kofyar settlement was "not an optimal solution to the agroecology of the Namu Plains," adapting to the pressure and rules of settlements rather than strictly conforming to them (Stone 1996, 186).

Critiques of Stone's study of the Kofyar and propagation of a methodological toolset of settlement ecology found few skeptics, with criticisms limited to an absence of utilizing cross-cultural information concerning frontier expansion (Picchi 1998, 174). Stone's later work departed from the broad studies of settlement patterning, focusing narrowly on agricultural decision-making. Using improved GIS technology and ethnographic data from new study areas, he and co-authors modeled how Indian farmers chose seed types based on social pressure rather than maximizing crop yields (Flachs et al. 2017), how farmers make decisions about crops and land as part of a social display (Stone 2018), and why farmers choose not to plant vitamin-rich Gold Rice (Glover et al. 2020). While archaeologists cannot fully replicate Stone's contemporary observation of the Kofyar, simultaneously tracking settlement expansion and evolution with ample information on social and cultural factors, his use of disparate data types and the dynamic

interplay of complex settlement rules established a new methodology for understanding archaeological settlement.

Archaeological adoption of the methodological approach of settlement ecology followed Stone's 1996 publication, acknowledging the theory explicitly and implicitly. Landscape archaeologists using settlement ecology also used the theoretical framework of historical ecology. Historical ecology emphasizes the dynamic nature of human-landscape interaction, with the landscape as an active participant in the creation of human cultural activities, not a static background that acts like a constraint or limitation on adaptation (Crumley 1994; Balée and Erickson 2006; Balée 2006). Like historical ecology, settlement ecology "acknowledges that landscapes are the products of people's interactions with their environments" (Anschuetz et al. 2001, 168). Kellet and Jones (2017b), in the introduction to their comprehensive edited volume *The Settlement Ecology of the ancient Americas*, define and outline the five principles of settlement ecology in archaeology, building on Stone's foundational anthropological work with direct application to archaeology.

1. Settlement ecology is applicable to "societies of all types," with any "specific characteristics (e.g., degree of social complexity, mobility/sedentism)," and any era of human occupation, although Stone (1996, 5) proposed a model narrowly applicable to agrarian societies.
2. In contrast to processual settlement archaeology or geographical models, settlement ecology is a "time and space contingent" methodological approach requiring detailed knowledge of the "specific and local environmental, social,

political, economic, ideological, and historical conditions" that limits universalizing cross-cultural comparisons.

3. Ecological interactions between entities lead to the "push and pull" of settlement prioritization, where reactions and adaptations to "ecological conditions, needs, pressures, and relationships" lead to subsequent reactions and adaptations.
4. The human agency of "conscious decisions made by people" in response to environmental, cultural, and social factors creates settlement patterns. Preexisting environmental traits or social characteristics do not determine settlement patterning without the intentional choices of people.
5. Spatial relationships between physical landscape features, settlements, cultural boundaries, social traits, and other factors are the primary analytical toolset of settlement ecology. Kellet and Jones argue a dichotomy between sites and non-site landscapes is integral for the use of GIS and other spatial technologies, the "best methodological approach in which to unravel the complex nature of prehistoric settlement patterns" (Kellett and Jones 2017b, 11–13).

While not all studies utilizing settlement ecology wholly follow all five principles, they form a helpful framework in which to structure research projects. Unlike Stone's ethnographic and anthropological analysis of the Kofyar, archaeological projects cannot simultaneously observe the changing trajectory of settlement patterning and collect detailed information about ethnic divisions alongside environmental documentation. Rather, archaeologists must reconstruct the rules of settlement and associated prioritizations by isolating each factor, analyzing its impact, and qualitatively

reconstructing the strengths and interplay of factors. Through the use of GIS, environmental reconstructions, and archaeological material culture, scholars used settlement ecology to expand on concepts of proximity and movement, population reconstruction, agricultural intensification, intergroup violence, and settlers' decision-making framework.

Applications of Settlement Ecology

As Kellett and Jones (2017b, 13) argue in their listing of principles of settlement ecology, GIS and other spatial technologies greatly enable the analysis of spatial relationships at the core of settlement ecology. Stone's (1996) volume on the Kofyar settlement ecology utilized early versions of GIS, devoting an entire chapter to quantitatively analyzing the spatial positioning of settlements, ethnicity, agricultural fields, and environmental data, supplementing the qualitative and descriptive explanations of settlement decisions. Advances in computer technology enabled GIS to better comprehensively manage environmental, cultural, historical data alongside multi-scalar archaeological data, enabling more advanced quantitative studies integrating and weighing the competing variables that contribute to settlement decisions (Maschner 1996; Wheatley and Gilling 2005).

GIS and other spatial tools granted the ability to better manage spatial data as well as create new types of datasets and more rigorously analyze the significance of correlations. Using freely available datasets like Digital Elevation Models (DEM) collected from satellites, scholars utilizing GIS can derive environmental and topographic data related to settlement decision factors. Least Cost Paths (LCP) calculate a route

between two points by determining the least amount of energy to move from one pixel to another, using various types of cost surfaces though most often elevation and its derived slope, creating a line that represents the most natural path of movement between two points (Conolly and Lane 2006; White and Surface-Evans 2012). Another GIS operation calculates the viewshed from a point, often an archaeological site, outputting the area visible from that point (Jones 2006; Wheatley and Gillings 2000). A related GIS algorithm calculates the topographic prominence, determining the point of highest elevation in a given area (Llobera 2001; Christopherson 2003). Topographic prominence can help determine which locations have the most defensibility while viewsheds reveal which sites are most visible, a useful characteristic for religious or ritual places. Further, the addition of metrics and evaluation of statistical significance, such as Ordinary Least Squares (OLS), alongside GIS facilitated validation of proposed settlement decision factors deviating from expectations (Hasenstab 1996; Kvamme 1999).

An important feature of settlement ecology's determination of the motivations and factors behind settlement decisions is the environmental characteristic of the study landscape, specifically factors related to sustenance. As populations require food and water as a core necessity, obtaining sustenance is not only one of the strongest priorities of settlers but the first principle for understanding the expected settlement patterning. Studies of contemporary populations can collect information concerning agricultural suitability or utilize land use data from global and regional geospatial databases, but archaeological studies face additional difficulties.

Studies reconstructing the environment of the last thousand years can utilize modern environmental datasets with only moderate changes. Working backward with land use data like LANDSAT multi-spectral satellite imagery or governmental agricultural surveys with recorded documentation of known changes in the global and regional climates, like sea-level rise or river damming, yields largely accurate information regarding agricultural soil quality and water accessibility (Hasenstab 1996; Maschner 1996; Jones 2010; Jones and Ellis 2016; Kellet and Jones 2017a). Even extrapolating past conditions from extremely detailed soil class data, using the current topography to model and extrapolate changes over time, often results in useful, albeit imperfect, data (Posluschny et al. 2012). However, studies further in the past must use more complex models to reconstruct the environmental and possible agricultural capability. Models using paleo-environmental data are the most comprehensive method for reconstructing the entire landscape and habitat of a given study area. Paleo-floral data from archaeological sites, including pollen (Bottema 1999) and charcoal (Guibal 1999; Vernet 1999), enable narrow reconstructions of an area's past environment by examining the types and health of vegetation during a site's occupation.

Combining site-level proxy environmental data across multiple sites leads to a more detailed understanding of the broader landscape in a region. By integrating floral and faunal paleo-environmental data into a GIS and simulating conditions, Brouwer Burg (2013) created an accurate facsimile of the landscape of Post-Glacial central Netherlands. In instances where the archaeological data lacks high-resolution paleo-environmental data or high-quality modern land use information, the archaeological record can assist in

environmental reconstructions. In a recent article, Hughes et al. (2018) created a cross-cultural model for reconstructing land use by inputting dozens of variables, including the known caloric intake of populations in the area, soil conditions, the dietary archaeobotanical evidence, and settlement size. Using a concentric circle model of land use, parallel to von Thunen and Christaller's proximity-based models, enables overlaying a proposed division over the observed environment. Unfortunately, all the detailed environmental reconstructions rely on inputting extensive high-quality local data or the availability of comprehensive geospatial datasets. While not all study areas have access to that material, settlement ecology studies utilize accessible information in parsing the factors of settlement decisions.

Case studies

Mobility and transportation are significant factors in influencing settlement decisions and the increased accessibility of GIS-assisted tools like LCP, based on geographical and culturally based cost surfaces. Originally based solely on DEMs and the physical restrictions of traveling the topography, cost surfaces define the cost of traveling from one point to another (Gietl et al. 2007). While DEMs and their derived slope are historically the most commonly used cost surface by archaeologists, given the accessibility of base data and experimental movement evidence, archaeologists increasingly use other constraining variables like vegetation, soil type, route visibility, or socio-cultural factors (Llobera 2000; Verhagen et al. 2019, 226-30). With the physical surface of a DEM as the background, recent studies added factors such as indigenous travel knowledge (Supernant 2017), pilgrimage sites (Kristensen and Friese 2017), and visibility of cultural waypoints (Bell and Lock 2000) as additional costs in the creation of

cost surfaces. Merging physical factors like slope or soil type with the important but incomparable cultural parameters requires using statistical tools like multi-criteria analysis and the weighting of inputs to evaluate significance for the creation of LCPs (Howey 2007; Howey 2011). Parsing out the impact of the many factors contributing to a cost surface parallels settlement ecology's codification of rules and priorities of varying strengths.

Minimizing travel cost and distance by increased proximity to points of interest is one of the most powerful deciders of settlement position and studying its role emphasizes the other motivations pushing against reducing costs. Carballo and Pluckhahn (2007) generated transportation corridors, a function related to LCP that outputs the best corridor to move through a region, to evaluate the growth of urbanization and political expansion in Tlaxcala, Mexico. The corridors' path and relative ranked travel time parallel the growth of ceremonial centers and territorial expansion, suggesting that accessibility was a primary motive behind cultural and political changes. Loughlin's (2017) settlement ecology based study of the small El Melón basin builds off previous work on generating settlement corridors, modeling how the collapse of the nearby La Venta created a power vacuum that precipitated a new concentration of power and economic exchange in El Melón. The beneficial characteristics of the physical landscape led to increased trade while political organization pushed towards further growth and consolidation. Herrera's (2017) work in the same volume explored how the use of topographic markers like glyphs served as mnemonics for navigation in the highlands of Columbia. The markers served as central places, anchors for attracting settlement into the mountainous micro-

environments, leading to diverse settlement types adapted to the ecological niches with "flexible social networks" (Herrera 2017, 216). Initiated as a tool to assist in navigating the difficult topography of the mountains, the waypoints pulled settlement towards arable portions of the landscape, creating a feedback loop between agricultural availability and proximity.

Stone's analysis of the Kofyar agrarian population, using the theories of agricultural intensification, demonstrated the impact of agricultural variability and field use on the macro-trends in settlement decisions. Settlement ecology studies of archaeological populations first require estimates of the size and makeup of the populace to investigate the dynamics of fields, proximity, and intensity. Brannan and Birch (2017) compare the roofed area at the Mississippian site of Singer-Moye with comparable sites to estimate population by period and conclude its population was directly affected by the utilization of the surrounding environs. To evaluate the effect of drought and adaptions to wet or dry periods in the American Southwest, Ingram (2017) used the sum of rooms in each watershed by period as a proxy for the watershed's ability to support high or low levels of population. Comparing the counterfactual situation where drought directly causes drops in population and subsequent rises during wet periods indicated that people in high-density areas were more likely to move as a response to drought. Lemonier (2017), lacking visible agricultural structures for the study of agrarian adaptations of the Maya Lowlands, used the position of households and neighborhoods to extrapolate likely field positioning. In comparing Bio Bec's hypothesized agrarian spatial layout to the

documented fields of La Joyanca, the household positioning method yielded accurate results. Using locations of the fields, households, and elite structures, Lemonier determined that La Joyanca residents were pulled towards greater proximity to elite residences.

Few settlement ecology studies, even in the only edited volume dedicated to operationalizing the theory, fully explicate the long list of settlement factors and the weight that occupants assigned each in their decision-making framework. Jones (2017) attempts such a task by creating a simple model to evaluate which settlement factors deviate from expectation. The model is based on the hierarchy of risk, the inverse of Maslow's hierarchy of needs, where factors are ranked from highest to lowest priority, with sustenance scarcity the highest settlement risk factor and site vulnerability one of the lowest. A multi-layered risk map, created from the environmental and cultural factors around Piedmont Village Tradition settlements in the American Southeast, represents the amount of risk at every point in the study area (Jones 2017, 39-42). The average value of each contributing factor in a 2 km catchment around each known site was calculated and compared against the expected ranking of risk mitigation. Deviation of average risk factors from the expectation in the hierarchy of risk indicated when settlement decisions were influenced by other influences, such as warfare leading to increased defensibility in lieu of water accessibility. Based on the same underlying Piedmont Village Tradition archaeological and environmental data, an earlier article by Jones and Ellis (2016) compared risk factors at each site versus a random sample of background points. Running a discriminant function analysis outputted quantifiable metrics of the most and least

important factors but, unlike Jones's 2017 book chapter, did not explore the settlers' decisions.

Comparison of the observed factors against the counterfactual of an idealized or random situation is a useful framework in the explication of multiple settlement decisions, as deviation from an expected situation warrants explanation. Jazwa and Jazwa's (2017, 157-8) article studying settlement patterns of Bronze Age Messenia bases its counterfactual idealized settlement model on "ideal free distribution" (IFD) of habitat suitability. IFD is a Human Behavioral Ecology model that measures habitat suitability and how settlement spreads into new habitats as population density increases in existing habitats. The authors compared the size, hierarchy, and distribution of archaeological sites in Messenia against the predicted IFD, observing a high degree of conformity to the ideal model, indicating the Bronze Age settlers based their decisions primarily on the environmental conditions of the landscape. However, the primary deviations from the IFD occurred related to the relationship of sites to the main elite center at the Palace of Nestor, suggesting that the cultural pull of the palace affected nearby settlements more than those further afield (Jazwa and Jazwa 2017, 164-67). The use of multi-factor risk and suitability models compared to idealized or hypothetical distributions enables settlement ecology studies to evaluate many of the decision-making factors contributing to settlement but requires robust datasets of environmental and archaeological data. In studies without high quality or large quantities of data, isolating variables over time is an additional method for understanding some of the factors that contribute to settlement outcomes.

Settlement Ecology of Sidekan

The question underlying the research objectives of this dissertation is what were the factors that motivated settlement and abandonment in the Sidekan subdistrict. Specifically, why are the sites where they are? Why did the residents choose to settle in this area? Is the prevalence of Muṣaṣir era sites an accident of discovery, or does it represent the actual disproportionate types of settlement in the archaeological record? Landscape archaeology cannot wholly answer the final question but analysis of the characteristics of the known sites, rather than a focus on the unknown, reveals qualities of the settlement pattern that suggests Muṣaṣir's existence brought attention and prosperity to this small network of valleys. As the previous literature review section demonstrates, scholars approached these questions from various directions, from purely quantitative with the use of GIS to extremely qualitative analyses of written and ethnographic records. Studies of movement and accessibility provide insight into the significance of those factors affecting the chronology of Sidekan and Muṣaṣir while the land use in the Topzawa Valley around Gund-i Topzawa reveals aspects of the growth and contraction of the region's settlement.

Given the biased nature of the Sidekan survey data – biased through discovery methods alongside road cuts and following the knowledge of pre-existing sites – many of the techniques that rely on full area coverage and a much larger set of sites are unsuitable for this project. Rather, I use two techniques to focus on three factors: movement corridors to explain the origins of the earliest material in Sidekan and the micro-analysis of fields around excavated sites to understand land use and intensification.

Chronology and Settlement Change in the Sidekan Region

Evidence from the region's historical overview (Chapter 3), archaeological excavations in the Soran district (Chapter 2), and excavation and site surveys in the Sidekan subdistrict (Chapters 4, 5) indicate notable occupation began in Sidekan during the Late Bronze Age (LBA). Radiocarbon results from Gund-i Topzawa East provide the earliest archaeological date in the Sidekan subdistrict, the 13th-12th centuries BCE. The earliest historical reference, of Aššur-uballiṭ I, the subduer of Muṣru, in the 14th century, suggests Muṣaṣir existed in some form by at least that century. In contrast, archaeological artifacts from Soran date as far back as the Paleolithic Period and include Neolithic Period, Early Bronze Age (EBA), and later occupation.

While non-existent in Sidekan, evidence of pre-LBA occupation is plentiful a few kilometers away, on the Diana Plain to the west and in the Urmia Basin to the east. Solecki's (1998) cave survey of the Baradost and Safar's (1950) excavation of the cave sites of Bastoon and Hawdian contained Paleolithic and Neolithic artifacts. Safar's cave soundings, up to 10 feet deep, included distinct Neolithic and Early Bronze Age type wares (e.g. Hasuna, Ubaid, Early Dynastic, Uruk) typical in Mesopotamia and Iran. Gird-i Banahilk's extensive excavation of Halaf material culture material demonstrates substantial Neolithic occupation on the core of the Diana Plain (Braidwood and Howe 1960).

RAP's excavation of Gird-i Dasht, the only major archaeological mound in the Soran district, recorded multiple examples of the Khabur Ware ceramic type, a clear indicator of Early and Middle Bronze Age (MBA) occupation (Oguchi 1997). This

unique painted ware spread from Mesopotamia across the Near East, into the intermontane valley systems of the Trans-Tigridian corridor and onto the Iranian Plateau, specifically at the site of Hasanlu, located ca. 50 km east of the Kelishin Pass (Danti, Voigt, and Dyson 2004, 586–92). The absence of Khabur Ware in the excavated and surveyed material from the Sidekan subdistrict, with its presence to its east and west, provides circumstantial evidence that occupation by pottery-making populations did not begin in a significant way until at least the LBA.

While the absence of pottery or historical records is not proof that the area was unoccupied, the environmental characteristics would suggest the populace were likely transhumanist pastoralists of some type, without evidence easily detectable through archaeological survey. However, unlike the cave-rich limestone Baradost Mountains, the geologic character of the Sidekan subdistrict is ill-suited for cave formation (Jassim and Goff 2006; Sissakian 2013). As a result, Sidekan's settlement desirability is far less the valleys to the west, surrounded by caves, and would likely not have attracted large transhuman populations. Thus, the archaeological evidence is consistent with sedentary occupation beginning in the mid-second millennium and presents the research question of why sedentary occupation emerged at that comparatively late date.

While one could propose hundreds of possible reasons why settlement in the Sidekan subdistrict did not begin until the comparatively late LBA, the area's isolation is characteristic underlying historical and contemporary discussions of the region. Movement into and out of Sidekan is the foundational principle of access and isolation and forms the theoretical and methodological approach for explaining the impact and

change of the region's isolation. While the emergence of Muṣaṣir as a political entity in the late second and early first millennia could have served as a cultural catalyst for sedentism, that inverts the cause and effect – Muṣaṣir required a pre-existing population. However, a new form of movement entered the Near East during the second millennium, instigating political and cultural changes elsewhere: the horse and its associated riding technology.

While the domestication of horses occurred as early as the fifth of fourth millennia on the Eurasian steppe, horses only became commonplace in Mesopotamia and Iran by the early-to-mid-second millennium (Anthony 2007, 397-403). Zooarchaeological evidence of domesticated horses from sites in Central Asia occurs by at least in the fourth millennium, although the extent of domestication as pack animals or for riding remains a question (Kohl et al. 2006, 138–40). As the genetic markers of equid domestication are insufficient for identifying horse domestication, given that domesticated males can breed with wild mares, the wear on teeth from biting bits and pictorial depictions serve as the primary indicators of the spread of the animal (Anthony 2007, 193-220). The only skeletal evidence of equids in Mesopotamia and its immediate environs until approximately 2500 BC was of onagers (Downs 1961, 1196). However, Mesopotamians were aware of horses before that time, with Ur III texts referencing them as the "ass of the mountains" (Anthony 2007, 416).

Art historical depictions in the third millennium show rudimentary carts and chariots towed by donkeys, onagers, or other pack animals like oxen (Moorey 1970). By the early second millennium, terracotta plaques begin showing people riding horses, and

in ca. 1900 BCE, a cylinder seal from Karum Kanesh in Anatolia depicts a horse-drawn chariot (Littauer and Crouwel 1987, 41; Anthony 2007, 403). Skeletal evidence of horse bones and teeth with wear patterns associated with bits and riding occurs between 2100-2000 BCE at the sites of Malyan and Godin Tepe in Iran, the first zooarchaeological signs of domesticated horses entering the Mesopotamian cultural sphere (Anthony 2007, 416). Textual documentation parallels the spread and adoption of horse riding in Mesopotamia and Iran. In the eighteenth century, texts from Syria describe packs of horses harnessed together with grooms and trainers at Mari (Moorey 1986, 198). However, horseback riding had not reached ubiquity, as a contemporary text condemns Mari's king, Zimri-Lim, for riding a horse (Anthony 2007, 418). Full economic and cultural adoption of horses for transportation and warfare did not occur until migrating groups underscored the animal's benefit.

Domesticated horses and their associated riding technology spread from the Central Asian steppe outwards, east and west, alongside trade and the migration of Proto-Indo-European riders (Anthony 2007). Horse bones at sites in eastern Anatolia from the Early Bronze Age support that migration from the steppes was the origin of horses (Collins 1996, 24). While domesticated horses spread peacefully through trade, the full-scale adoption of horses followed eastern ethnic groups' utilization of the animals for warfare. In the MBA, Kassites and Mitanni conquered populations of Babylonia and Syria, respectively, due to their expertise in horse rearing and militarization. The name of the Mitanni, *maryanni*, becomes associated with horse warriors because of their equestrian proficiency (Boyce 1987, 508). Mitanni, an Indo-European elite class ruling

over an ethnically Hurrian population in Syria, as well as the likely Indo-European Kassite rulers of Babylonia, were early adopters of the horse-drawn chariot for warfare (Moorey 1986, 197). Kassite texts extensively discussed horses, horse breeding, and aspects of charioteering, emphasizing a core characteristic of their power (Malko 2014). With the display of military prowess, the bulk of the Mesopotamian populace adopted horses for warfare, commercial activities, and improved conveyance by the latter half of the second millennium (Kohl et al. 2006, 141).

Along with military benefits, horses brought extensive economic and transportation advantages. Herding, for example, became more efficient with horseback riding. A pedestrian pastoralist can herd 200 sheep while one on horseback can drive 500 (Anthony 2007, 222). Transportation assisted by horses shows similarly significant increases. Animals like the ox, donkeys, and onagers were harnessed to sleds or wagons for transportation but could not move goods as quickly and as far as horses (Wilkinson 2014, 48-49; Kohl et al. 2006, 145). A two-wheeled cart, more well suited for horses than donkeys, has 40% less draft than a four-wheeled version, resulting in 60% more efficient transportation of the same amount of goods (Anthony 2007, 65-69). Compared to an ox, a horse can walk twice as long with a full load, four hours versus two, and travel 60 km in a daily workload compared to the ox's 25 km distance (Bökönyi, 1991, 553). This drastically improved transportation ability led to cultural and political changes in the Middle and Late Bronze Ages, increasing interconnectivity between urban centers and rural settlements. As the horse's presence in the Near East occurred in the centuries preceding the earliest archaeological evidence and textual references to Muṣaṣir, could

this phenomenon have enabled the beginning of sedentary occupation and later developments in the area of Sidekan?

The emergence of domesticated horses, riding technology, and carts assisting in transportation occurring nearly simultaneously to the LBA archaeological material in the Sidekan subdistrict warrants an analysis of the significance of the nascent transportation method. Horses' impact on transportation and connectivity between sites in the Sidekan subdistrict and surrounding regions must be at a level necessary to spur the beginning of growth in sedentarism. A method in determining the impact is calculating the travel time and distance between the Diana Plain and the Sidekan subdistrict highlands to compare pedestrian versus horse transportation and movement. LCP between the Early Bronze Age (EBA) site of Gird-i Dasht, on the Diana Plain, and Mudjesir, the proposed core of Muṣaṣir, yield different routes that are combined with data on travel time.

A major variable used to calculate the cost of crossing terrain that generates the LCP is the velocity of travel, denoted in GIS as the vertical factor table (Becker et al. 2017). This variable conveys how different slopes, going upwards and downwards, change the speed or provide additional friction for movement. For most archaeological LCP analyses, the path modeling is based on the hiking equation by Tobler (1993), created by experimentally observing how humans on foot traverse the terrain at different slopes. That method has proven effective for many studies, even if a bit simplistic (Conolly and Lane 2006). While far less utilized in the literature, some archaeological studies attempted using LCP with non-pedestrian locomotion, including horses (Sunseri 2015; Verhagen, Nuninger, and Groenhuijzen 2019). The critical difference for

generating horse-based LCP is the change in velocity, indicated with the vertical factor table. The most common calculation uses Tobler's hiking function as a base and multiplies exponential function by 1.25, described by Tobler (1993) and based on earlier research of horse cost movement by Imhof (1950). Other publications of cost formulas used racehorse velocity on slopes and equestrian treadmills for the dataset (Eaton et al. 1995; Self, Spence, and Wilson 2012). Archaeological LCP studies most often use Tobler's modified hiking function, although the other formulas reveal that the horse variation of Tobler's formula overemphasizes the benefit of horses on steep slopes (Lugo and Alatriste-Contreras 2020, 4–6).

To evaluate the possible benefits of horse assisted versus pedestrian transportation over the mountains surrounding Sidekan, I generated two LCP between Gird-i Dasht and Mudjesir, using Tobler's pedestrian hiking and modified horse hiking functions. The origin was set at the site of Gird-i Dasht to model a hypothesized travel or trading journey to the population center at Mudjesir. Using ArcMap 10.8, I first generated a slope raster from a DEM[89] as the initial cost surface, which I then combined with a cubically weighted ranked waterways raster to account for the difficulty of crossing large rivers. The Path Distance used the cost surface, with a vertical factor table based on Tobler's hiking equation as one version with another using the modified hiking equation to represent horse travel. The Path Distance function generated a raster representing the relative costs of traveling from pixel to pixel starting at the site of Gird-i Dasht. The Cost Path function created rasterized routes between the two sites representing the least

[89] Based on ASTER satellite imagery.

amount of travel expended from those two surfaces, with one version outputting a metric for travel hours and another representing the accumulated cost (Figure 6.1).

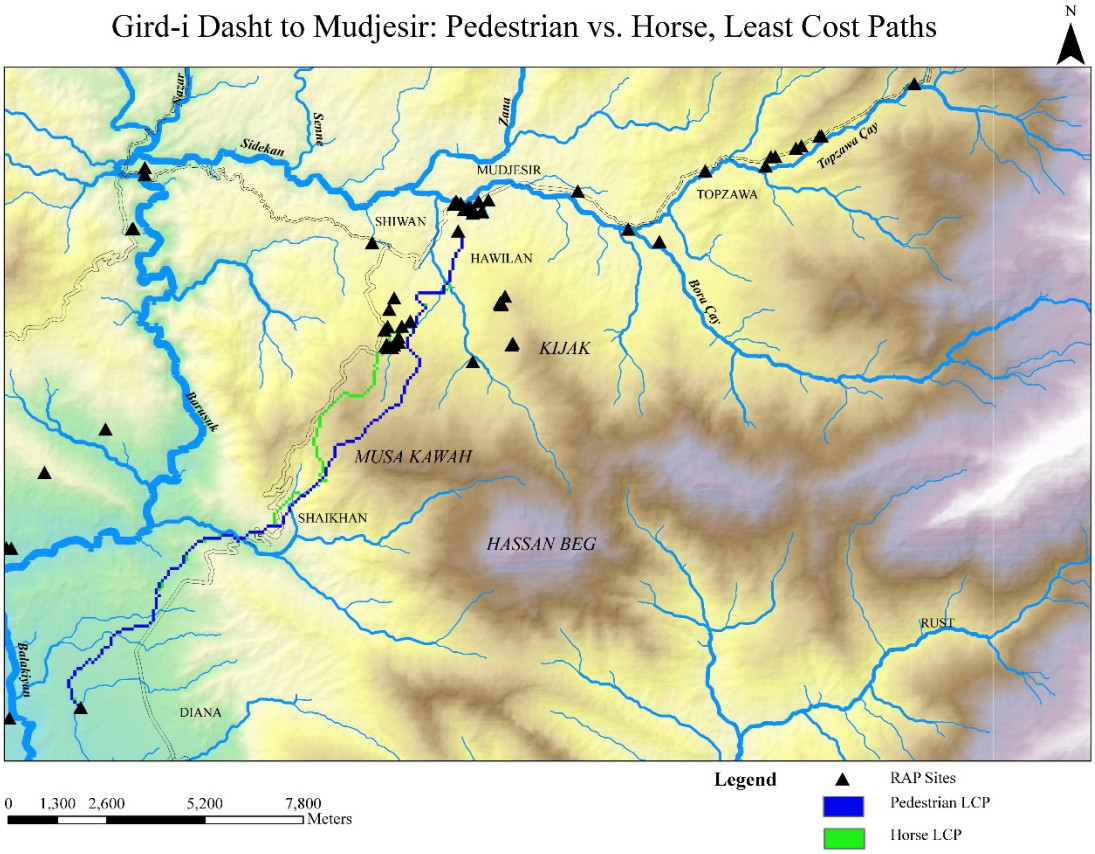


Figure 6.1: Pedestrian and Horse Least Cost Paths Between Gird-i Dasht and Mudjesir

The dual LCPs reveal minimal differences in routes between the two modes of transport, but the associated travel times and efficiencies indicate substantial benefits for horse-assisted transit. Both routes' rough corresponding paths nearby the modern road from the Diana Plain to the town of Sidekan support the accuracy of the LCP. However, the pedestrian LCP shows a 4% longer route (18.3 vs. 17.6 km), avoiding the steeper slope of the descent into the Hawilan Basin by descending on the basin's edges. While the difference in distance is minimal, the one-way route time crosses the threshold for

significance. The pedestrian route is estimated to take 4.8 hours of constant travel while the horse's last 3.89 hours. As noted, horses can travel four hours with a full load before requiring rest and ride 65 km total in a day (Bökönyi, 1991, 553). At the generated time (3.8 hours) and distance (17.6 km), a horse could travel round-trip between Gird-i Dasht and Mudjesir in one day, while a pedestrian or an ox would likely require rest before the return. In addition, the overall difference in costs, 29.5 for horse and 45.95 for pedestrian, equal a 43.6% overall improvement in horse transportation. With the tall grass on the mountain slopes supporting traveling horses, the EBA occupants could far more easily access and travel to the valleys of the Sidekan subdistrict.

The horse's impact on transportation to Sidekan, while demonstrable and substantial, is not, on its own, sufficient to prove horses led to the founding and development of polity that became Iron Age Muṣaṣir. Further research, specifically of the excavated faunal bones, may provide additional evidence for the appearance and importance of horses. The prevalence or absence of horse bones and bit-worn teeth in the lowest levels of the site of Gird-i Dasht and the existence of bones around the site of Mudjesir could show the capability of horses to improve communication, trade, and movement between the sites as evidence of their use at this time. However, the proposed propagation of domesticated horses and their use for transportation as one of the factors that affect the rules of settlement ecology that Stone discusses provides a means of exploring the apparent establishment of sedentism in the Sidekan area.

While horse-based transportation may have been a factor precipitating the start of archaeologically visible sedentary occupation in the Sidekan subdistrict in the LBA, other

factors contributed to the contraction of occupation after the 8th-7th centuries BCE. The biased and limited survey sample size constrains the direct evidence of contraction or abandonment in Sidekan, a few data points support at least a moderate reduction in settlement: the burning of the final occupation levels at Gund-i Topzawa in Iron III, parallel burning at sites along the Topzawa Valley, multiple Achaemenid burial sites in the valley, nearly non-existent Achaemenid settlement evidence across the subdistrict, and a near absence of post-Achaemenid artifacts until the Islamic period.

The major destruction event at Gund-i Topzawa Building 1-W Phase B provided a bounty of artifacts and information about room use but showed little sign of violence towards the inhabitants. Given the building's type and quantity of objects, it is unlikely the residents abandoned the building, and a fire destroyed the structure after their departure. However, the abandonment of the upper levels and possible squatter occupation for some time, without an apparent later rebuild nearby, suggests the fire may have precipitated abandonment. The extreme destruction of Qalat Mudjesir on top of an Assyrian-style doorway raises the intriguing possibility of Scythian destruction of the area in parallel with their attacks against Urartu in the 7th century but requires further research of Qalat Mudjesir to establish that connection. The surveyed sites to the west, specifically Gund-i Manga with its comparable ceramics, displayed similar burning in the road cut section.

At Gund-i Topzawa, an Achaemenid burial formed the final archaeological phase after the building’s primary use. Further east down the valley, Ghaberstan-i Topzawa’s nearly contemporaneous burial suggests a transformation of the valley from settlement

and occupation into inhumation on the outskirts of Muṣaṣir. Despite multiple Achaemenid or post-Achaemenid burials, archaeological evidence for Achaemenid occupation is almost non-existence. The Achaemenid style column bases at Mudjesir suggest their presence, at least at that site. However, survey and excavation of the Mudjesir fields and Qalat Mudjesir recovered no clear Achaemenid style pottery. In addition, the excavated and surveyed pottery of the whole area provides evidence of Sasanian-era occupation, ephemeral on the small plain of Sidekan, but no additional types until the Islamic period. The totality of these factors suggests settlement in Sidekan post-Iron III at the very least contracted from its peak contemporary to Urartu. Given the transformation in RAP's data of the Topzawa Valley from a population center to a location for burials in the mid-first millennium, the study of the Topzawa Valley's settlement organization can reveal not valuable data about land use in the Sidekan area but shed insights into chronological questions.

Population and Land Use in the Topzawa Valley

Despite the incomplete survey dataset for a study of Sidekan's landscape, the extensively excavated and intensively surveyed site of Gund-i Topzawa provides a unique perspective to analyze the characteristics of settlement from the micro-level and build upwards towards regional conclusions. The settlement insights Gund-i Topzawa provides come from the use of rooms in the excavated Building 1-W Phase B, the types of archaeobotanical remains, and the detailed breakdown of other buildings at the site. Using those data with ethnographic studies enables reconstruction and modeling of population sizes and broad insights about land use around the site. While the other similar

sites along the Topzawa Valley (RAP23, 21, 22) lack Gund-i Topzawa's specificity concerning excavated material or the number and types of buildings, the distribution of site locations enables the expansion of conclusions about Gund-i Topzawa's immediate environs to the whole Topzawa Valley. Further, understanding the land use in the Topzawa Valley provides a major pillar in the explication of Sidekan and Muṣaṣir's settlement patterns. The room type and usage of the excavated parts of Gund-i Topzawa, largely from Building 1-W Phase B, provide relevant data connections to ethnographic and archaeological studies of population sizing. Archaeologists utilize various techniques for estimating the population of archaeological sites, from estimates of total site area, natural resources in the area, and extrapolation from features of individual dwellings, among others (Zorn 1994, 32–35).

In Kramer's (1982) ethnography of the pseudonymous village of Aliabad, she lays out the features of each dwelling in the village, including the number of bins and ovens and the total dwelling and compound area. With that information, she included the number of families in each house. In total, she lists the characteristics of 30 houses of two stories, providing a dataset to find the average number of bins, storerooms, and square footage per family. The size of a family requires some discussion and overview of other ethnographies. Kramer lists the household size as ranging from 5.1-6.3 person while Watson's ethnography of a nearby village lists four to five people, with a mean of 4.6 (Watson 1979, 47; Kramer 1982, 123–24). Others enumerate the family size between 3.5 and 8 individuals (Zorn 1994, 33). Given the wide range of Watson and Kramer's numbers, ranging from 4 - 6, I use five people per family as a simplified value to

encompass the findings of the many ethnographies examining pre-modern Middle Eastern cultures. Textual accounts from Mesopotamia could provide a different perspective, but the demonstrable difference in material cultures indicates that data may not be transferable to the Zagros Mountains highland people.

Kramer's dataset of dwelling features and number of families yields the average numbers of families per feature used to extrapolate the population of Gund-i Topzawa. On average, the houses of Aliabad had 2.25 bins/family, 1.75 storerooms/family, and a total area of 46.6 sq/m per family (Kramer 1982, 114–15). The fully excavated Gund-i Topzawa Building 1-W Phase B contained bins and storerooms, enabling the calculation of families in the building with those metrics. 1-W Phase B contained two medium-sized bins and 2-3 storerooms. Rooms 2 and 3 were surely storerooms of some kind, while Room 1 seemingly served a dual purpose. According to Kramer's observations, that yields 4.5 families using the bins and 3.5-5.2 families based on storerooms. Note that the bin dimensions described at Aliabad were significantly larger than those in Room 2. The Aliabad residents reserved the second-floor rooms for living space, which corresponds to the interpretation of Gund-i Topzawa.

Calculating the total square footage of Gund-i Topzawa Building 1-W Phase B is complicated by the second story and unknown extent of the southern portion of the building. However, the collapsed remains indicated that the second story extended only over Rooms 2 and 3. Measuring the building as only the visible extent, with two same-sized rooms over Rooms 2 and 3, the total square footage of Gund-i Topzawa Building 1-W Phase B equaled 73.5 sq/m. Using the dwelling space per family value yields 1.6

families in Gund-i Topzawa Building 1W Phase B. As the square footage represents the minimum possible size, 1.6 families should be considered the minimum size, not representative of the projected size. In addition, courtyards were an important component of household compounds, but the excavated material at Gund-i Topzawa provides little insight into the size or existence of courtyards. Therefore, the three metrics, bins, storerooms, and square footage, result in 4.5, 3.5-5.2, or 1.6 families at Gund-i Topzawa. Kramer notes that of the features of Aliabad, bins are most likely to correspond to population size. However, a conservative estimate, given the size of the bins and incomplete information on square footage, is 3 families living in this building at Gund-i Topzawa, with a total of 15 people.

Extrapolating the estimated population of one building at Gund-i Topzawa to the entire site requires assumptions based on the number of rooms in each building. Building 1-W Phase B had five rooms, including the two upper stories. Buildings 2W, 3W, and 4W each had two rooms visible but lacked the triangular wall that defined Building 1-W Phase B's Room 3. Given the similar elevation in the section and types of structures, they likely had second stories, totaling six rooms. At roughly two-thirds the size of Building 1-W Phase B, their population can be estimated as two families, or ten people per building, equaling an additional 30 individuals at Gund-i Topzawa West. The population estimate at Gund-i Topzawa East is slightly more complicated. From the excavated material, that area of the site is not easily identifiable as contemporary to Building 1-W Phase B. However, the upper phase of Building 2-E, cleaned but unexcavated, parallels the rebuilding and reuse between Building 1-W Phase B and 1-W Phase A, suggesting at

least some contemporaneous occupation in the east. With six rooms in the east, the estimated population is five families with 25 people. Thus the total population of Gund-i Topzawa in the 8th century is estimated at 70 people.

The total estimated population of Iron Age Gund-i Topzawa, while interesting, does not provide much insight into the land use surrounding the site and distribution of settlement in the valley. Another ethnographic study from the nearby village of Rust in 1956 provides detailed information on fields surrounding a settlement (Galloway 1958). The brief publication lists the number of houses (130), total population (700 people), and a detailed map of every field and its type around the village. While the distribution of crops cannot be directly compared to the Iron Age, as some cash crops were introduced from the New World, the fallow patterns and amount of cropland per person can serve as valuable proxies for the similar environment of Gund-i Topzawa. To accurately capture the area of the fields and the accompanying characteristic of the land, like slope, I vectorized the map and georeferenced the vectorized map in ArcGIS, converting it to editable shapefiles (Figure 6.2). The shapefiles provided the total area of each field type as well as the total field area (Table 7). Notably, as referenced by Galloway in the article, the amount of fallowed land was only 11.7%. While minimal fallowing is often a sign of intensification, as discussed by Boserup, Galloway's description of the fields suggests the fertility of the soil requires less fallowing than more arid environments.

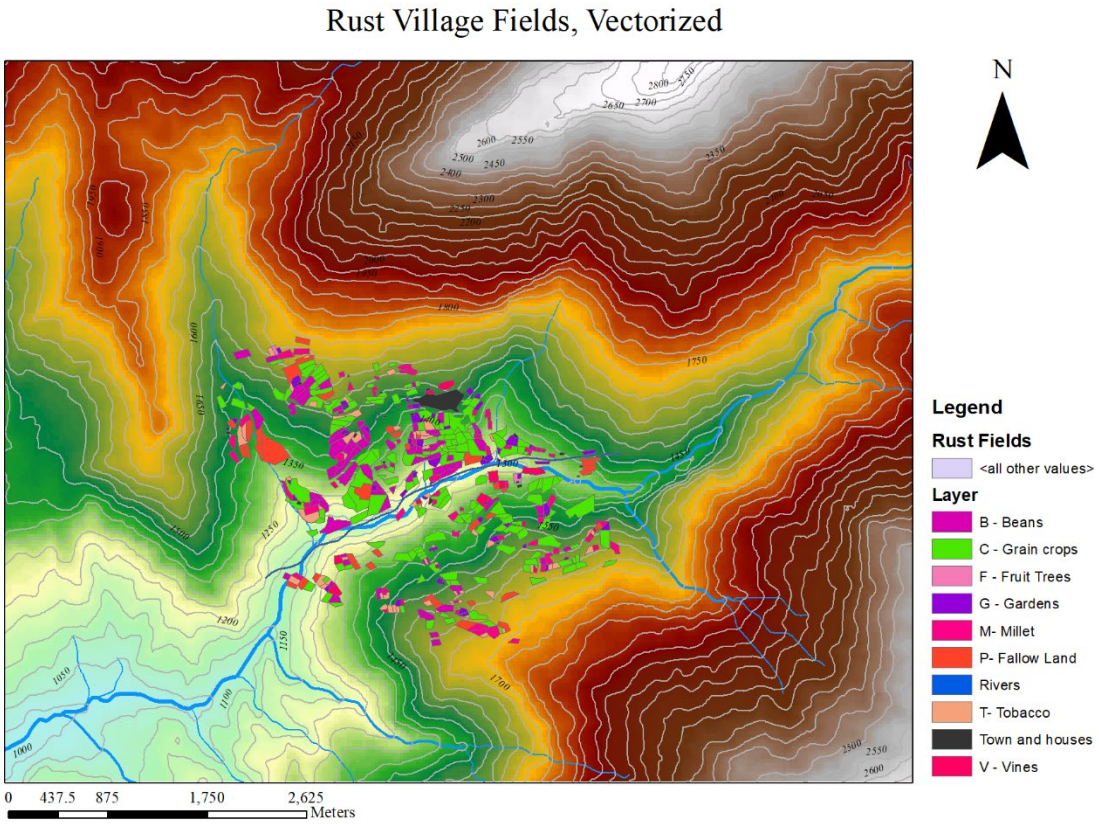


Figure 6.2: Vectorized field of Rust overlaid on DEM

The georeferenced Rust field data indicates a total of 2.078 sq/km of fields, including the .244 sq/km under fallow. Assuming Galloway's enumeration of the total population of 700 is correct, that equals 2968 sq/m of fields per person. In addition, I joined the slope derived from the DEM to the Rust field shapefiles, taking the average value for each field's covered area. Although the exact field locations are imperfect, as the combination of georeferencing and a hand-drawn map from the 1950s does not yield perfectly located polygons, the slope for each feature type broadly aligns with the assumed slope. For example, the average slope of fruit trees is 33 degrees, the rivers are

16 degrees, and the remaining fields equaled about 20 degrees. Thus, the average slope of all the fields is 20.8 degrees, with a standard deviation of 7.24. While the village of Rust was larger than Gund-i Topzawa's estimated population and Rust's geography slightly differs from Topzawa's, the nearly identical climates, similar topography, and cultural continuity enable a comparison to the land use around Gund-i Topzawa.

Table 8: Cropland Area in Vectorized Rust Fields

Crop Type	Area of Cropland (M)	Percent of Total Cropland
Grain crops	901021.2	43.4%
Beans	401445.2	19.3%
Fallow Land	244135.0	11.7%
Millet	183456.8	8.8%
Tobacco	154135.7	7.4%
Gardens	116636.3	5.6%
Vines	70730.9	3.4%
Fruit Trees	6480.1	0.3%

As a way to estimate if the accuracy of the fields per person and population of Gund-i Topzawa were roughly accurate, I created a raster that represents the possible arable land in Sidekan, including the Topzawa Valley. While many archaeological studies use complicated methods to derive the arable land, ranging from multi-spectral imagery of contemporary soil as proxies for agriculture in antiquity to derived geospatial analysis of time constant geographic features, I opt for a simpler method based on the observed Rust fields (French, Duffy, and Bhatt 2012; Codding and Jones 2013; Jones and Ellis 2016; Howey and Brouwer Burg 2017). This method took the range of slopes observed in the fields, i.e., any slope below 28 degrees, and a cost distance raster of 800 m distance from waterways. The result was a raster of a single value indicating possible agricultural land. As Figure 6.3 indicates, this is not a wholly accurate facsimile of

potential agricultural land. It serves, rather, as a maximal view of agricultural use. Around the point of Gund-i Topzawa, I generated a polygon buffer that included 207,804 sq/m of arable land, as indicated in Figure 6.3.

Gund-i Topzawa Est 70 Population Field Catchment Area

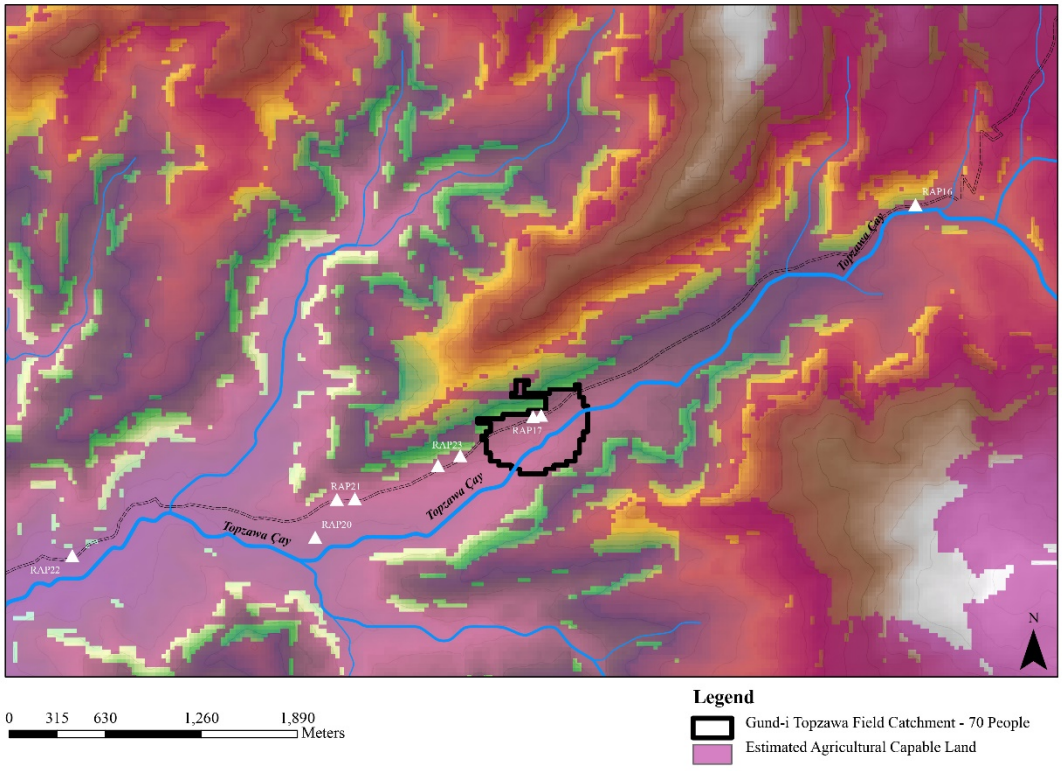


Figure 6.3: Catchment of Agriculturally Capable Land around Gund-i Topzawa

The outline of the required arable land around Gund-i Topzawa for the given population estimates of the site and estimated field acreage per person derived from Rust presents two takeaways. First, the area consumes the immediate environs of the valley, including the equally fertile land to the south of the river. Thus, the combination of two estimated variables yields an area that, from the available data, passes the so-called eye test. Second, the southwestern border of the polygon forms a border with the immediate

catchment of Gund-i Manga (RAP23). Without information on the number of walls, I cannot duplicate this procedure for that site, but the general size of the catchment can be assumed as similar in size, reaching further south. Unfortunately, we did not survey the road to the west of Gund-i Topzawa, so we cannot evaluate if that catchment area would overlap a neighboring site.

While only a single polygon based around two estimated measures, the land use around Gund-i Topzawa gives the insight that the populace likely extensively utilized the valley floor at the height of the settlement's size. Assuming Gund-i Manga followed similar patterns, it is likely that during the Iron III period, the height of Muṣaṣir and Urartu's focus on the area, residents of the Sidekan region used much of the Topzawa Valley's high-quality agricultural land. With the Topzawa Stele's location marking Urartian kings' travel down the valley from Kelishin Pass, historical information further reinforces the importance and intensification of the valley during the period.

Using the same method of estimating the amount of arable land enables calculating the relative intensity of Muṣaṣir's agricultural and occupation of the Sidekan region. While the archaeological estimate of Muṣaṣir's population is impossible from the available data, Sargon II's description of capturing the city provides a metric on which to base estimates. On line 349, the text describes taking 6,110 people of Muṣaṣir away to his camp. While Neo-Assyrian campaign accounts likely overestimate victories and number of captured enemies, using 6,110 people to generate a polygon of possible arable land around Muṣaṣir, based on the Rust person per field calculus, yielded an area roughly covering Sidekan, indicated in Figure 6.4. Much like the Gund-i Topzawa polygon, the

results are rudimentary and not intended as representative of the true area covered. However, assuming Sargon II exaggerated the number of captives, but the overall population of Muṣaṣir was similar to his stated metrics, Sidekan and the kingdom seemingly followed the proposed intensification of land in the Topzawa Valley. The possible intensification of settlement to cover nearly the full extent of Sidekan by the Iron Age kingdom combined with the catalyzing force of horse transportation in the LBA simultaneous to the rise of Muṣaṣir in the textual record helps answer the original queries of settlement ecology in Sidekan.

Mudjesir 6,100 Population Field Catchment Area

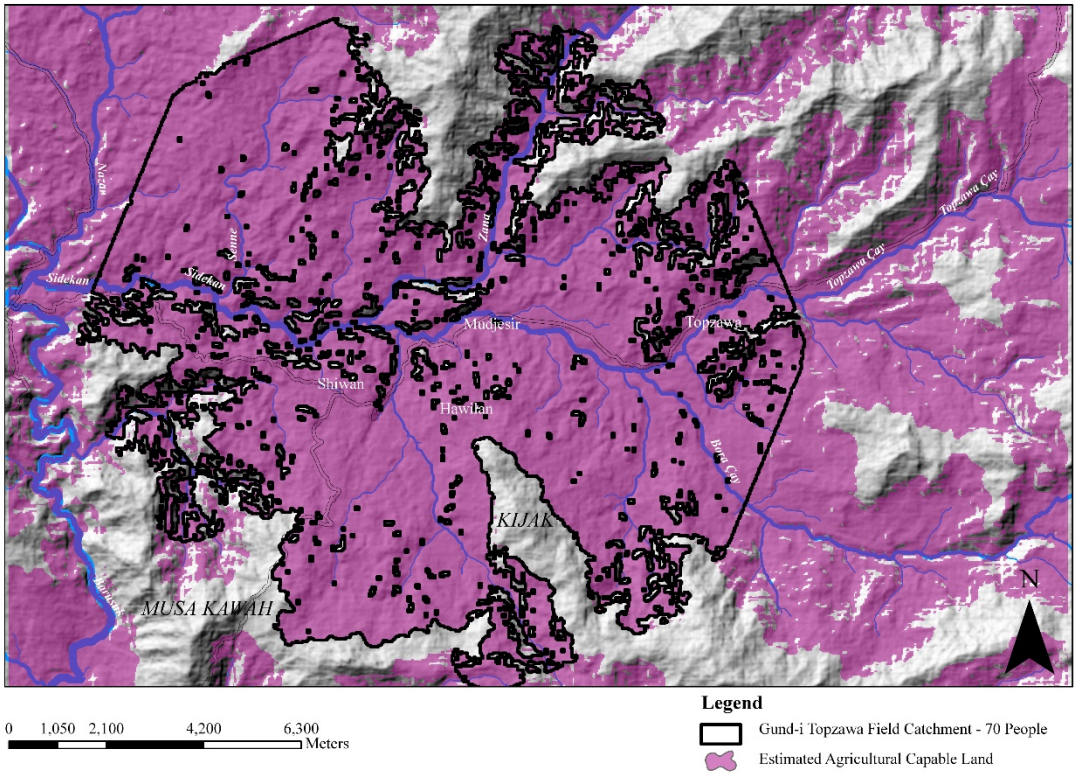


Figure 6.4: Estimate of Required Agricultural Land around Mudjesir for 6,110 People

Settlement Decision Factors for Sidekan

With multiple factors of settlement decision captured in the preceding sections, we can return to the central questions that initially spurred this specific study: Why are the site where they are? Why did residents choose to settle in this area? Is the prevalence of Muṣaṣir-era sites an accident of discovery, or does it represent the actual disproportionate types of settlement in the archaeological record? The available information cannot fully answer these prompts, but the insights about transportation access and land use intensification permit a narrative explanation of the spread and contraction of occupation in the area that indirectly addresses the research questions.

The available archaeological data suggest that occupation in Sidekan pre-Bronze Age was either minimal or confined to nomadic populations, with an uptick of settlement in the Late Bronze Age. Increased transportation mobility precipitated by the prevalence and accessibility of equine pack animals is postulated as one of the factors behind this increase. In addition, the reduced transit time from the Diana Plain and greater use of the Kelishin Pass connected the Sidekan valley system to neighboring cultures focused attention along the route between the Iranian Plateau and the Mesopotamian plains. Fundamentally, Sidekan and the outlying valleys are areas of marginal settlement that require additional effort for substantial agriculture. With interconnectedness enhanced through more expedient routes, settlement began to grow and expand.

As archaeological evidence of the extent of Late Bronze Age occupation in Sidekan is severely curtailed, with only scant physical data indicating activity at all, the

current research project cannot determine the amount or intensity of that period's settlement. However, the historical evidence of campaigns against Muṣru and its linguistic descendants indicate, at minimum, a loose political entity of some size in the region by that time. One aspect not directly concerning settlement patterns and answered with the discussed data is the early reference of Muṣru as a sacred or holy city. Assuming the correctness of that interpretation and accuracy of Musri as Muṣaṣir, the site's religious significance undoubtedly served as another catalyst for increased settlement. Further, if the holy city or cult center held meaning for the populace in nearby areas, the increased ease of access would serve doubly serve to facilitate settlement growth. The question of early Muṣaṣir/Muṣru's religious position and importance for outlying groups directly connects to the origin of Urartu seen through the lens of the Ḫaldi cult. Chapter 7's conclusions discuss the possibilities and implications of such association.

By the Iron Age, around the time of the emergence of Urartu around Lake Van, Sidekan/Muṣaṣir had almost assuredly grown to a sizeable entity with a concentrated core around the Ḫaldi temple. While Gund-i Topzawa Building 2-E may date to the 10th or 9th centuries BC, the construction of the drain at Mudjesir provides a clue to the state of Muṣaṣir before the Urartian conquest. The radiocarbon date of the drain is between 895 and 833 BC, which, given the nature of a drain, would indicate the drain ended use around that time. The thick fill above the drain was seemingly intentional, postulated as part of a leveling operation that would correspond to the elevation of Ḫaldi as Urartu's supreme deity concurrent with the royal journey commemorated in the Kelishin Stele. Regardless of the nature of the rebuilt structure, the monumental drain in the 9th century

demonstrates a well-built monumental center. In the outskirts of the political entity, at least in the Topzawa Valley, the settlement decision locations seemingly relied on the slope of the hillsides, placing settlements at the upper bounds of optimal agricultural land. By the 8th century, the population of these hillside settlements was intensely cultivating the valley. Given the relatively limited agriculturally capable land, the location of settlement enabled this maximal agriculture. The archaeological evidence cannot currently provide insights regarding the character and extent of Iron Age settlements in the western valleys and basins. However, the occupation surrounding the modern-day field of Mudjesir was far more extensive than that in the Topzawa Valley.

Determining the extent and date of abandonment at the end of Iron III related to Urartu, Neo-Assyria, and the major historical events largely relies on the burn layer at Gund-i Topzawa Building 1-W Phase B with other circumstantial evidence from the limited excavations of Qalat Mudjesir. The exact date of the destruction of Gund-i Topzawa is complicated by the radiocarbon date's ambiguity owing to the Halstatt Plateau. However, the probability it was the result of Sargon II's invasion is minuscule. Two questions influence that interpretation: whether the burning was before Sargon II's campaign or after the Urartian reconquest and whether the burning resulted from military activity or a natural event that corresponded to a larger abandonment of the valley system. In either case, the extremely hot burning at Qalat Mudjesir, over a Neo-Assyrian style threshold, would suggest violent destruction of the temple after Sargon II's occupation of Muṣaṣir. However, given the Urartian importance on Ḫaldi, a demolition of that structure without rebuilding is unlikely. Rather, a probable explanation is the

Scythian migration and attacks against Urartu and eastern Neo-Assyrian settlements in 5th and 6th centuries BC also reached Muṣaṣir and the Ḫaldi temple. If so, the destruction and simultaneous chaos in Urartu decreased the attention and support of Muṣaṣir, causing, if not abandonment, contraction to the core around Mudjesir.

The nature of Achaemenid material partly explains the post-Urartian and Neo-Assyrian settlement of Sidekan in the area. Archaeological evidence of Achaemenid occupation is sparse and unevenly distributed. Excavated sites of the period include only burials at the uppermost layer of Gund-i Topzawa Building 1 and Ghaberstan-i Topzawa. We recovered no other Achaemenid material in the Topzawa Valley. At Mudjesir, despite the vast quantities of Iron III pottery, none of the collected pottery clearly dates to the Achaemenid Period. However, the Achaemenid style column-base provides at least circumstantial evidence that worship of Ḫaldi continued at that site. Combined with the latest known mention of Ḫaldi (technically "Son of Ḫaldita") from the Behistun Inscription in 521 BC, a case exists that the Ḫaldi cult persisted through at least that time. With the archaeological evidence restricted to burials with elite goods, the cult possibly consisted exclusively of the religious facilities and their direct support, with worshipers of Ḫaldi from across the Achaemenid Empire visiting on pilgrimages of some support. The lack of domestic Achaemenid material could be explained by a change in settlement decision towards lower-lying areas utilized in the Iron III for agriculture. Still, regardless, that change would signify a changed prioritization away from maximal agriculture production.

By the Sasanian period, seen through the excavation of Sidekan Bank (ca. 5th-6th centuries CE), the population of Sidekan may have transitioned or reverted towards mobile or transient behaviors. That site had characteristics of a temporary location for storage of goods, with wood or other burnable materials covering the short-lived shelter. The subsequent periods are ill-represented in the archaeological and historical record, but ceramics of the Islamic Period suggests a possible increase in population by that point. The later archaeological evidence of settlements in Sidekan remains sparse, and survey has only begun the process of understanding the nature of Islamic material in the area. However, the accounts of the rise of the Sorani Emirate, Muhammad Kor's forced conquest of the Pireseni tribe, and the travels of Jewish traders into Sidekan to meet with the tribal leaders indicate the population of Sidekan was largely transient and separated politically and culturally from the residents of the Diana Plain through at least the 19th century. The combined historical and archaeological evidence supports the hypothesis that the more significant amount of Iron Age ceramics and sites in the archaeological record reflects the reality of a uniquely large and settled population at that time, providing a temporary answer to the prevalence of Muṣaṣir-era sites. With the proposed settlement peak with Muṣaṣir, the question of why people settled in this area is in part answered by the nature of Muṣaṣir – a religious center with vital importance to surrounding empires. With the Ḫaldi cult and associated activities at Muṣaṣir, wealth and population flowed into Sidekan. If Sargon II's account of sacking the Muṣaṣir treasury has any accuracy, the types of fine goods and metals, like silver and gold, in Muṣaṣir originated elsewhere, as the area has no know sources of those metals. The nature of the

religious center, its early founding, and its connection to Urartu remain a major question in understanding Sidekan's archaeological history.

Chapter 7 : Conclusion - The Character and Origin of Muṣaṣir

Understanding Muṣaṣir's character relies on the full corpus of archaeological and textual information presented in the preceding chapters. Combining the complete database of information concerning Muṣaṣir reveals aspects of its character under-discussed regarding its growth and religious cult. Much of Urartu's history and the near totality of Muṣaṣir's history remains unknown or understudied, relying on new archaeological or textual information. Interpretations of the historical geography or political organization of Urartu and Muṣaṣir depend on the extrapolating details in cuneiform records in the context of known locations. As such, the following discussion of Muṣaṣir's religious architecture, relationship to Urartu, and reconstruction of Sargon II's route rely on supposition. However, presenting possible interpretations based on new information enables discussion of larger issues in the study of Urartu and imperial expansion more broadly.

Despite the focus on the kingdom because of Sargon II's eighth campaign, described in detail in his Letter to Aššur, the king's entry into the city deserves additional focus. Muṣaṣir's mountainous character is evident from the totality of texts and archaeological material, but the interaction between its intermontane location and the Assyrian route reveals an alternative interpretation of the related relief on Sargon II's palace at Khorsabad. The relief depicting the sack of Muṣaṣir provides insights into the domestic architecture of Muṣaṣir, paralleling the results of the archaeological analysis, as

well as the possible existence of a local Ḫaldi cult alongside the imperial Urartian temple. Ḫaldi's relationship to Urartu exposed the unreliable foundation of Muṣaṣir's growth and how the Urartian royalty used a deliberate system of religious ideology as a tool in their imperial expansion.

Sargon II's Route into Muṣaṣir

Many scholars have dedicated significant time and energy to reconstructing the route and toponyms of Sargon II's eighth campaign. The fundamental impediment to this task is the lack of Assyrian toponyms with direct linkages to known sites in Iran. However, the relevant issue of Sargon II's route for the research on Muṣaṣir is strictly concerned about the last leg of his journey, the sack of Muṣaṣir. Using Mudjesir's location as a confirmed link to Muṣaṣir in the campaign text leaves one pertinent question: did Sargon II come to Muṣaṣir from the Kelishin Pass, burning villages along the Topzawa Çay valley on his destructive campaign to teach Urzana a lesson in disobedience to the Assyrian Empire, or did his armies sneak in a different route, coming from the west? The answer affects the interpretation of the destruction at Gund-i Topzawa – whether the Assyrian king caused the conflagration of Building 1-W Phase B – and the identity of the buildings depicted on the Khorsabad relief that provide contextual information about Muṣaṣir's characteristics.

Most recent scholars' reconstructions agree that Sargon II attacked Muṣaṣir going over the Kelishin Pass (Lehmann-Haupt 1931, 310, 325; Zimansky 1990, 4; Muscarella 2006; Fuchs 2018, 43–44), influenced by the existence of Išpuini's stele and the road that

follows that route. While Assyriologists began mapping the journey a century ago, more recent archaeological data invalidated many of the earliest publications' foundational arguments and conclusions. Reconstructing Sargon II's route, working backward from Muṣaṣir's location at Mudjesir, reveals significant problems matching the area's geographic features. Sargon's last location in Urartu proper is Uiše, a large fortress controlling an Urartian district.[90] He then left Urartu and went to the "district of Ianzu, king of the land Na'iri"[91] the king of Hubuškia. Sargon passes through Na'iri district, at a distance of four *beru* from Hubuškia. In this section of the text, he declares his reasoning for attacking Urzana and Muṣaṣir then initiates his attack. He takes the "road to the city Muṣaṣir, a rugged path,"[92] forces the army to "climb up Mount Arisu, go up the mountain, Arisu, a mighty mountain that did not have any ascent, (*not even one*) like that of a ladder."[93] He then crosses "the Upper Zab River, which the people of lands Na'iri and Ḫabḫu called Elamunia River, in between Mounts Šeyak, Ardiskši, Ulayu, and Alluriu."[94] The text describes the mountains as "lofty mountain ranges, and narrow mountain ledges," forming "no pathway for the passage of (even) foot soldiers,"[95] and are "thickly covered with all kinds of useful trees, fruit trees, and vines as thick as a reed thicket."[96]

[90] RINAP 2 65: 297-305
[91] RINAP 2 65: 306
[92] RINAP 2 65: 321
[93] RINAP 2 65: 322
[94] RINAP 2 65: 323-324
[95] RINAP 2 65: 325
[96] RINAP 2 65: 327

Among these mountains are "gullies made by torrential water – the noise of which resounds for the distance of one league, just like the thunder of Adad."[97] At that point, he goes along a route "no king had ever crossed and whose remote region no prince"[98] had seen. During the passage, he boasts that he felled "large tree trunks" and hacked through "narrow places along their (mountain) ledges"[99] that were "(so) narrow that foot soldiers could only pass through sideways."[100] Then Sargon II and his armies entered Muṣaṣir, sacking the city and capturing the royal family while Urzana escaped. Where then are the locations described by Sargon II after he departs Uiše? Uiše/Waisi was the Urartian stronghold for the southwestern part of Lake Urmia. Determining the route between Uiše and Muṣaṣir first requires determining the location of the Urartian fortress. Its exact location is debated, notably between Muscarella and Zimansky, who connected textual portrayals to archaeological evidence.

Zimansky proposed Uiše was the fortress site of Qalatgah, relying partly on the text's classification of Uiše as the largest of Rusa's fortresses, its position on the "lower border" of Urartu, and linguistic connections between Uiše and Ushnu (Zimansky 1990, 17–18). However, Muscarella (1971; 1986, 465–75) assigned the different toponym of Ulhu to Qalatgah, using the eighth campaign's description of a rushing water source as a connection to the modern site's adjacent spring. For the location of Uiše, Muscarella (1986, 474–76) and Salvini (1984, 46–51; 1995, 87) assigned the fortress of Qaleh Ismael Aga, further north along the western coast of Lake Urmia, given a partial reading of an *in*

[97] RINAP 2 65: 326
[98] RINAP 2 65: 328
[99] RINAP 2 65: 329
[100] RINAP 2 65: 330

situ inscription at the site, its large size, and the cliffside castle's proverbial "back" described in the Neo-Assyrian chronicle. Deviating further, Levine (1977, 147) locates Uiše significantly further to the north and west, "between the Zab headwaters and Lake Urmia," not far from Hakkari in Turkey. Levine's placement of Uiše, unlike those of Zimansky, Muscarella, and Salvini, did not rely on archaeological evidence or *in situ* inscriptions. As Uiše was one of the largest fortresses in Urartu, the continued absence of a substantial fortress archaeological site in that area makes Levine's interpretation unlikely.

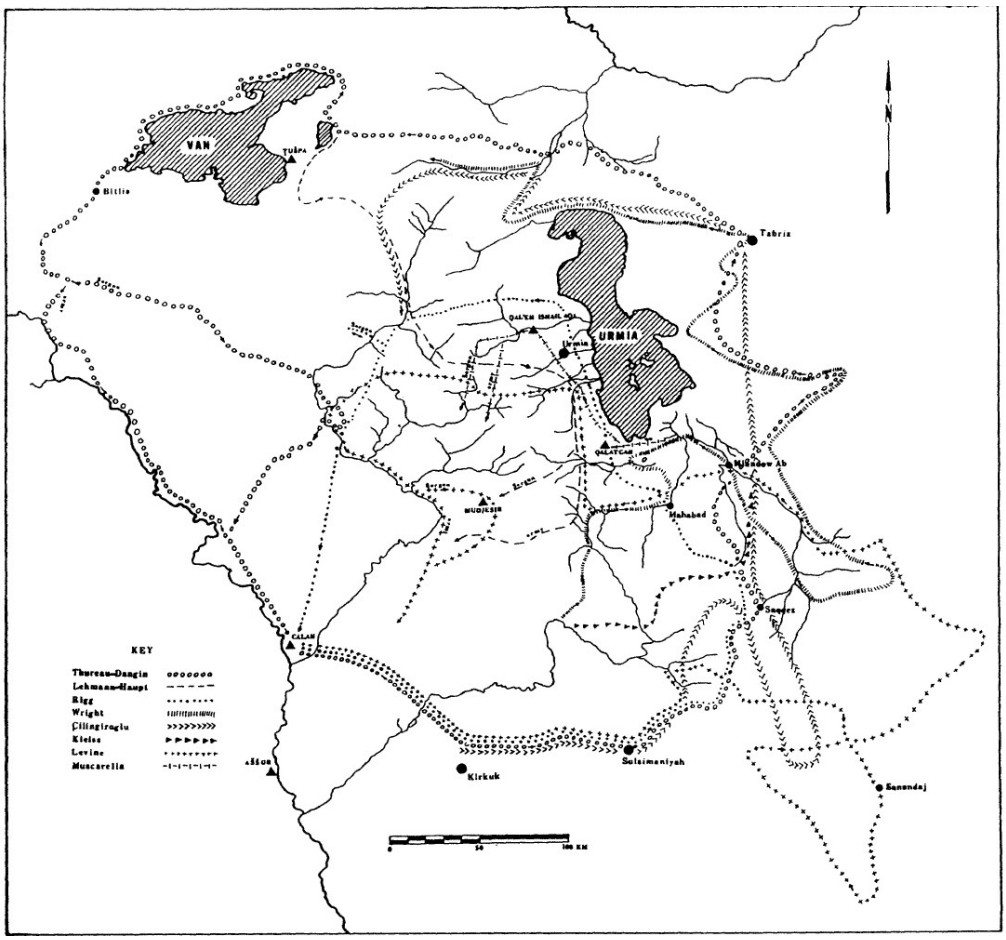


Figure 7.1: Overview of Possible Eighth Campaign Reconstructions (Zimansky 1990)

Regardless of the exact location, most recent scholars placed Uiše in somewhat similar regions southwest or central west of Lake Urmia. Hubuškia's position, the following listed toponym in Sargon II's trek to Muṣaṣir, is also ardently debated, split between northern locations, deep in the Taurus Mountains of Anatolia, or southern, in the valleys of the Zagros Mountains nearby Gawra Shinke Pass or Rowanduz. Following their more northern placements of Uiše, Muscarella, Salvini, and Levine locate Hubuškia to the north. Salvini (1967, 72) proposed the Bohtan Su plain, south of Lake Van in the Taurus Mountains, as the most likely location of Hubuškia, a spot in which Levine (1977, 143–44) explicitly agreed. Muscarella's assignment of Uiše at Qaleh Ismael Aga forced him to locate Hubuškia nearby, near the modern Turkish-Iranian border[101] (1986, 473–75).

The northern interpretations of Hubuškia rely either on each scholar's chosen reconstruction of Sargon II's eighth campaign or a view that equates Na'iri with Anatolia. Reade (1994) dismisses the northern location of Hubuškia as unlikely, using other Neo-Assyrian references to the polity as well as an alternative reconstruction of Sargon II's route to locate Hubuškia to the south or southeast of Muṣaṣir, in the general area between Ushnu, Rowanduz, Pizhder, and Mahabad. Adding more specificity, Russell (1984, 195–98) locates Hubuškia near modern Rowanduz or the valley systems surrounding the town, using other Neo-Assyrian kings' more southerly reference to the polity as supporting evidence. However, excavations and surveys by RAP in Rowanduz and the Diana Plain have not, at present, recovered any archaeological evidence that would confirm or deny

[101] Despite the northern position of Hubuškia, Muscarella did not believe Sargon II's armies ventured into the Taurus Mountains.

that interpretation. Fuchs (2018, 43) placed Hubuškia south of Muṣaṣir, between Zamua to the south and Mannea to the east, in the general area of the valleys east of Rowanduz. In Fuchs's reconstruction of Sargon's route, the king leaves Uiše, heads south to Hubuškia, and then loops back north, crossing over the Kelishin Pass. Sargon II's journey over the pass remains the most common interpretation of recent route reconstructions (Lehmann-Haupt 1931, 310; Zimansky 1990, 4; Kroll 2012c, 11–12). However, do the geographic features depicted between Hubuškia and Muṣaṣir align with the known topographical attributes?

Two geographic landforms missing in the proposed route over the Kelishin Pass are the "Upper Zab," known as Elamunia to the locals, and the gullies or waterfall that "resounds for the distance of one league."[102] The first, the Upper Zab, has no clear parallel in the area's geography. While contemporary names of rivers and their tributaries do not align precisely to the Assyrian perception of those watercourses, one can assume two details: that whatever body of water termed the Upper Zab was at least a somewhat significant water feature and that it was a tributary of the Upper Zab River, in some perceived way. No such river exists when crossing over the Kelishin Pass from anywhere on the western side of Lake Urmia. The most significant water feature is the Godar River, which flows eastwards from the Zagros Mountains towards Lake Urmia, in the opposite direction of the Upper Zab. Even if one assumes that the scribes of Sargon II's texts took creative liberty with the river's size, the only river in this route is the Topzawa Çay. While this stream eventually combines to form the Upper Zab, it occurs after merging

[102] RINAP 2 65: 326

with dozens of other small tributaries. While Lehmann-Haupt (1931, 140) suggested the Topzawa Çay as Elamunia, the stream is the least likely interpretation. The Barasgird River is the most likely of the major rivers near the Kelishin Pass to qualify as a major tributary of the Upper Zab, with its gorge and surrounding mountains fitting Sargon II's tales of treacherous passage. However, no route crossing the Kelishin Pass would intersect that river. Only a northern positioning of Hubuškia and a southward trek, as Levine reconstructs (1977), would pass that river, a fact established as unlikely and practically impassable.

Assuming Sargon II's route crossed the Kelishin Pass and moved directly to Muṣaṣir, the Topzawa Çay is the only likely candidate as Elamunia, but the area is also absent the mighty gullies or waterfalls of the text. Personal travel on the road leading to the Kelishin Pass did not reveal a thundering waterfall. Searching satellite imagery and historical accounts concerning the rivers east of Sidekan did not show any features that could conceivably be called a waterfall. Although the absence of a waterfall and the diminutive Topzawa Çay are not enough to refute that Sargon II's route passed over the Kelishin Pass, the primary reason for reconstructing the Neo-Assyrian's path over the pass relies on one central argument, the Urartian royal road. Along with the Kelishin Stele, the Topzawa and Movana stelae locations established the Urartian "royal road" from Lake Van to Muṣaṣir ran by Lake Urmia, passing each of the Urartian inscriptions on the route over the Kelishin Pass towards the cult center at Mudjesir (André-Salvini and Salvini 2002, 29–30). Even assuming Sargon II's boast of no king or prince traversing this road denigrated the status of Urartian kings and princes, it ignores the

multitude of Middle and Neo-Assyrian kings who seemingly passed through this area on their way eastwards. Further, the vivid portrayal of the treacherous path would ignore that this route was the primary conduit for Urartu-Muṣaṣir interactions, not a rugged backcountry track. With the lack of corroborating geographic evidence, what is an alternative route of Sargon II's travel from Hubuškia to Muṣaṣir?

Following the proposed location of Hubuškia in the southern valleys, including the area around Piranshahr in Iran, Sargon II's journey to Assyria may have begun by following the course of the primary modern road, crossing into Iraq at the Gawra Shinke Pass. The route between this path and Rowanduz was one of the principal pathways from Iraq to Iran in antiquity and modern times. Hamilton's account of road building in this area supports its common usage. His path from Rowanduz eastwards to the Iranian border first left that city and followed the pre-existing caravan path (Hamilton 1937, 110–11). The Berserini Gorge forms a treacherous barrier, forcing the path to ascend 600 m to the town of Dergala before descending alongside the Choman River for the remainder of the route east (Levine 1973, 8). Although forming the most direct journey to Iran and Urmia plains, even in the 19th century, the quality of the road was poor and surrounded by "sharp ridges of rocks" and a series of smaller gorges between the Berserini Gorge and the border crossing (Pfeiffer 1854, 274; Hamilton 1937, 164). However, compared to the long and dangerous hike across the Kelishin Pass, crossing the Gawra Shinke Pass was fairly easy (Levine 1973, 8).

Unlike the route over the Kelishin Pass, this itinerary crosses a significant water feature, the Choman River. Further, the Choman River is a direct tributary of the Upper

Zab River, merging with the Barusk River at Rowanduz then joining the Upper Zab River after flowing through the Rowanduz Gorge (Figure 7.2). Along with the reference to the river, the mountains surrounding this route may parallel those in the eighth campaign text. Although details about the Šeyak, Ardiskši, Ulayu, and Alluriu mountains in Sargon II's eighth campaign do not provide enough detail to definitively align them with any geographic features, the hyperbolic description of Arisu, "that did not have any ascent, like that of a ladder"[103] is intriguing. The route from Gawra Shinke passes at the base of the Halgurd and Cheeka Dar Mountains, the two highest mountains in Iraq, which could easily be mistaken for one mountain with two peaks. One would expect Sargon II and his scribes to take note of such an imposing feature. Also visible to the south of this route is the Qandil Mountain, another of the country's tallest peaks, another prominent feature to record. Reade's (1994) reconstruction of Sargon II's path, with Hubuškia around Piranshahr or Rowanduz, also interprets this watercourse as Elamunia.

The other feature of the Assyrian text absent along the reconstructed route over the Kelishin Pass is an associated waterfall or torrential gully. Another convincing argument for Sargon II's route crossing Gawra Shinke on the way to Muṣaṣir is the Kani Bast waterfall. Located approximately 4 km south of the Choman River and modern Road, Kani Bast is the tallest waterfall in Iraqi Kurdistan (Rudaw 2019). The Assyrian text notes that the waterfall was heard at a distance of "one league [*beru*]" provides another supporting connection, emphasizing the water's acoustics rather than its visuals. An Assyriologist from this region of Iraq, Dlshad Zamua (2017, 3), previously connected

[103] RINAP 2 65: 322

this waterfall to that in Sargon II's account. Although he did not present the evidence behind this link, the magnitude of this water feature and the Choman River's possible identity as Elamunia substantiate this.

An remaining question is how did Sargon II and his expeditionary force reach Muṣaṣir from the Choman River? The two previously discussed routes into Sidekan are the new road – beginning in Shaikhan, ascending the mountainside, descending into the Hawilan Basin – and the old road – starting from the western banks of the Barusuk River, tracing the hillside of the Sidekan River heading to Mudjesir. Either route, from Choman, would involve passing by the precarious Berserini Gorge, crossing the Diana Plain, and scaling another substantial mountain. While not an impossible journey, the text's following four lines do not match the length and rigor of that trek. However, an analysis of the terrain using GIS tools reveals an alternative route that fully parallels Sargon II's narration of his entry into Muṣaṣir.

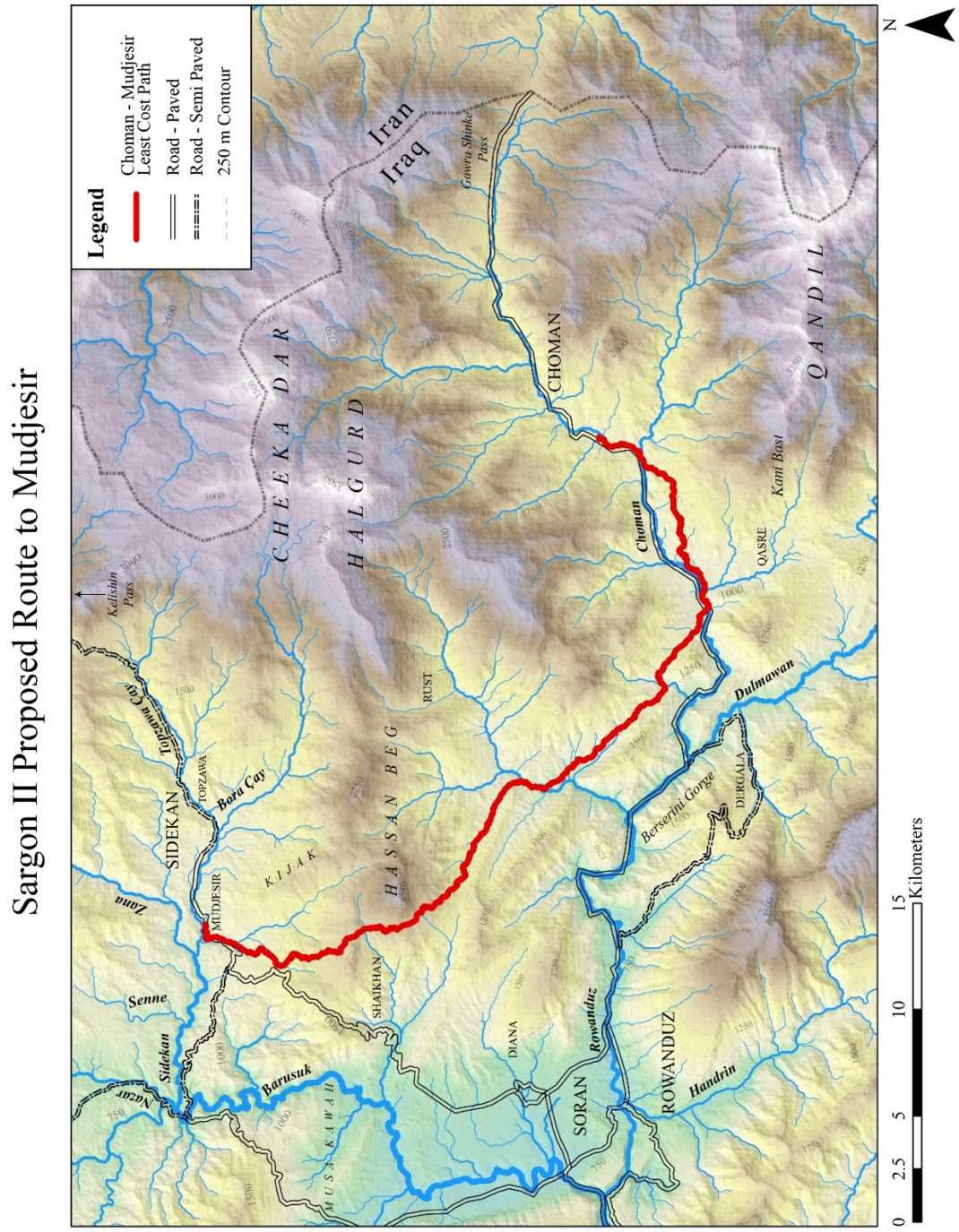


Figure 7.2: Sargon II Proposed Route to Mudjesir

With one known point at Mudjesir and one proposed location along Sargon II's route at Choman, running a least cost path (LCP) analysis between the two locales generated a route the algorithmic calculated as most expedient. When using tools like LCP, the scholar's role is to combine human intuition and contextual knowledge to determine if the given path is a suitable facsimile of reality. The LCP process for Sargon II's route used ASTER as the DEM and Tobler's Hiking function, as described in Chapter 6. The LCP exposed a previously undiscussed route into Sidekan that aligns with the description in the eighth campaign (Figure 7.2). Beginning from Choman, the resulting path follows the course of the Choman River, reaching one of the small tributaries near the village of Qasre, downstream of the Kani Bast waterfall. At that point, it heads northwest along a long valley, avoiding the treacherous Berserini Gorge while running parallel to the waterway, barely rising in elevation. After passing the Rust River, the route ascends, first up 400 m along a narrow valley, then another 500 m near the peak of Hasan Beg Mountain, encircling its western slopes. The route reaches a peak then descends into the Hawilan Basin, parallel to the new Sidekan road, joining the modern route not far from Mudjesir.

Although entirely computer generated, large portions of the LCP closely follow modern roads, confirming the feasibility of a path in antiquity. While none of the available travel accounts directly describe this path, a publication during the British Mandate describes a small but thriving village, Rust, along this route (Galloway 1958). Galloway and his companions traveled from Rowanduz to Galala, near the point the LCP departs from the Choman River and took a two-hour climb to the top of a "7000 foot

ridge" near Rust (Galloway 1958, 361). Further evidence supporting this route's use during Iron Age are caves along these ravines with Iron III ceramics, including the site of Bokadera (Kaercher 2014, 77–78). Other caves with similar material, located by the Soran Directorate of Antiquities but unpublished, exhibit characteristics typical of storage for transient populations.

Among the most compelling arguments that Sargon II traveled this path is the passage "whose area no king had ever crossed and whose remote region no prince who preceded me had ever seen."[104] While often disregarded in historical geography reconstructions, the proposed route fits that unique specification. Coming from Assyria, this route would be illogical and counterintuitive, requiring passing the Rowanduz and Berserini Gorges on the eastward trek, only to immediately backtrack to the northwest and take a considerable mountainous ascent. For the Urartian kings, their royal road over the Kelishin Pass served as a far more direct and secure route, passing through areas conquered early in the formation of the dynasty by Išpuini and Minua. With this underutilized route, Sargon II could successfully use the element of surprise, entering the kingdom and reaching the Ḫaldi temple in mere hours.

The Structures of the Muṣaṣir Relief

Reconstructing Sargon II's route into Muṣaṣir described in his Letter to Aššur adds a new interpretation to the robust literature retracing the historical geography and presents a new perspective on the analysis of the relief from his palace at Khorsabad.

[104] RINAP 2 65: 328

While scholars cannot take the depictions on the relief, or any Neo-Assyrian relief, as purely literal, one assumes the artist, or official relaying contextual information, attempted to portray the setting at least somewhat accurately (Fuchs 2011). However, with the proposed western entry of Sargon II and his army into Muṣaṣir, the perspective of the Assyrian artist would face eastwards towards the structures of Muṣaṣir. Thus, the relief's organizational structure, likely mirroring the geographic arrangement of Muṣaṣir, is split into three parts, the left, center, and right. Notably, Boehmer and Fenner (Boehmer and Fenner 1973, 513) also believed Sargon II entered the city from the west, and the relief reflected that city's westward orientation. The proposed connection of the archaeological material to the relief is that the leftmost buildings represent typical domestic architecture like the structures at Gund-i Topzawa, the central Ḫaldi temple from Sargon II's eighth campaign text was located in the excavated fields of Mudjesir, and the right structure depicts a local variation of an Urartian *susi* style temple located at the modern site of Qalat Mudjesir.

The left side of the relief depicts a scaled hill, with a multi-tiered cluster of structures on its top and sides and two left-facing figures standing in front of a person seated on a throne (Figure 7.1). The structures are divided into a grid three tall and four wide, with each square portraying a large door-like rectangle at its base, a row of three small squares above, and rows of apparent crenellation along the upper line. While many scholars in the century since Botta (1849) published a sketch of the relief have debated and proposed many interpretations about various aspects of the image, the consensus interprets the leftmost structures as residential buildings of some type. The only pertinent

issue of disagreement is whether the three tiers represent terracing on the hillside, portrayed stylistically, or a single multi-storied structure. Forbes (1983, 46) believes the crenellation on top of each row of buildings represents the roofline of the structures, terraced three levels up the hillside. His argument relies, in part, on an apparent absence of typical domestic Urartian houses with significant second stories (Forbes 1983, 115). Excavations of Gund-i Topzawa Building 1-W Phase B indicate hillside houses in this area routinely had second stories, at least three meters tall in places, and support that the triple windows of the structures in the relief depicted a two-story building. Survey of the Mudjesir hillsides indicates, however, that the residential buildings were two-storied and terraced.

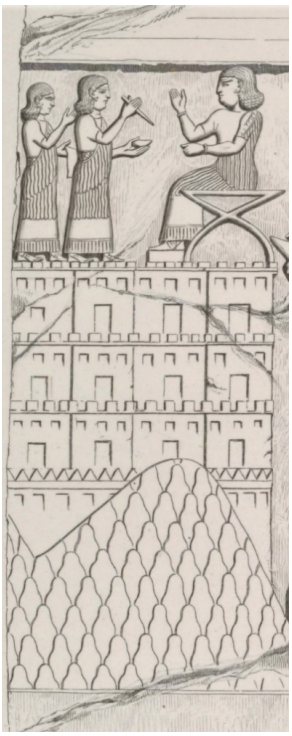


Figure 7.3: Muṣaṣir Relief Detail. Left portion (Image from Albenda 1986 Pl. 133)

Agreeing with Forbes' assessment of the crenelated terraced houses, Jeffers (2011) compares the structures to another Neo-Assyrian relief from the palace of Sargon II's son Sennacherib at Kuyunjik. Multiple slabs illustrate the Neo-Assyrian king's sacking of a mountainous kingdom, identified in the accompanying text as Ukku. Two slabs (Room I, Slabs 1-2; Room I, Slab 4a) contain depictions of structures comparable to those on the left of the Muṣaṣir relief (Figure 7.4). Each collection of structures has a large rectangular door and small square windows above. However, unlike the Khorsabad relief, the number of windows varies between one and two rows of three, and these buildings lack the crenellation of the Muṣaṣir houses (Jeffers 2011, 109–11). The structures to the right of Room I, Slab 1 reinforce the terracing theory of Muṣaṣir, as the irregular rooflines of the buildings would not correspond to stacked stories. Apart from the visual similarities of the houses in the two Neo-Assyrian kings' reliefs, the geographic locations of Ukku and Muṣaṣir belie the characteristics of each settlement pattern.

Ukku was a small kingdom on the borderlands between Urartu and Assyria, with strong political connections to the kings of Lake Van. Radner's (2012, 257–58) analysis of Sennacherib's campaign path towards the kingdom, royal correspondence concerning Ukku's king Maniye, and archaeological connection between Van and Hakkari led her to propose Ukku's location in the modern Turkish province of Hakkari. Apart from the historical evidence, the linguistic connection between Ukku and Hakkari provides a convincing argument. The Hakkari province lies directly between the Turkish Van province, home of the Urartian kings, and the Iraqi Sidekan subdistrict. Like Sidekan, the

province is exceptionally rocky and mountainous. Given the topography, the matching houses of Ukku and Muṣaṣir were structures adapted to the harsh environment. Although the imagery of other structures in Ukku, such as the multi-tiered fortress from Room SLVII, Slab 11-12, aligns with Assyrian depictions of Urartian architecture, the Muṣaṣirian structures do not share similar Urartian features (Gunter 1982; Earley-Spadoni 2015, 45). Despite the visual continuity suggesting a single variety of hillside houses in mountainous provincial Urartian areas, the multi-story hillside terraced domestic buildings are unrepresented in the standard imperial domestic typology (Forbes 1983, 115). As construction of the surveyed sites around Mudjesir paralleled the style of the excavated structures in Topzawa, one can assume the Ukku houses reflected a common architectural style of dispersed and unfortified domestic residences.

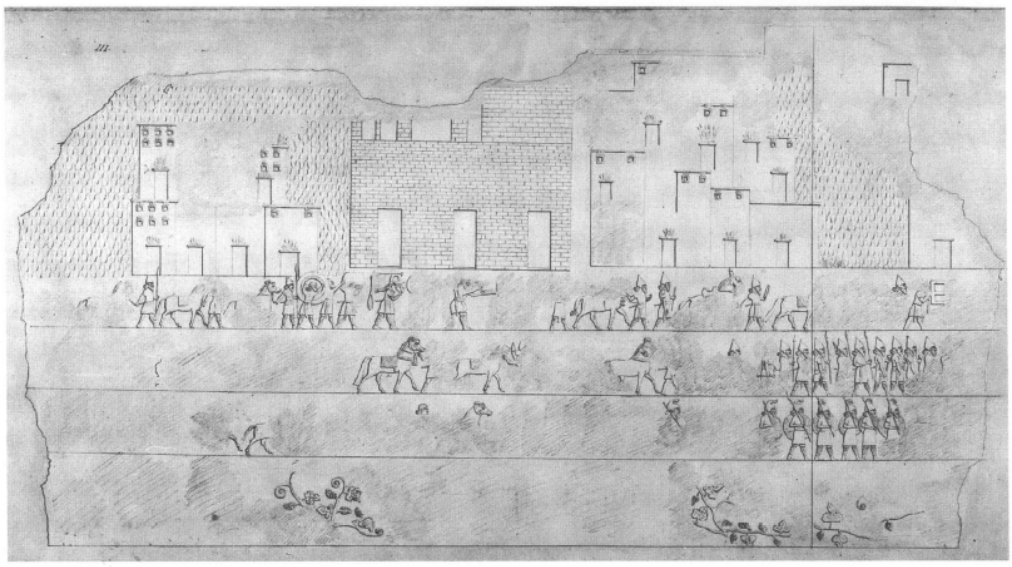


Fig. 4 Room I, Slabs 1–2. Southwest Palace, Kuyunjik (© Trustees of the British Museum).

Figure 7.4: Sennarcherib's Destruction of Ukku, Room I, Slabs 1-2. SW Palace. Kuyunjik (Adapted from Jeffers 2011, Figure 4)

In addition, the locations and quantity of possible terraced buildings around Mudjesir match the houses on the left of the Muṣaṣir relief, providing further evidence of Mudjesir's identity as Muṣaṣir and suggesting relatively commonplace domestic architecture surrounded the complex at the core of the kingdom. Sennacherib's depiction of Ukku's primary city parallels the apparent dispersed settlement around Muṣaṣir's urban core. Ukku, on Room XLVIII, Slabs 11-12, had only a small Urartian-style fortress at its peak, with unwalled structures surrounding the citadel (Jeffers 2011, 108). Given that depiction and the completely absent illustration of a fortified structure from the Muṣaṣir relief, the unwalled domestic architecture surrounding Muṣaṣir's temple is consistent with the archaeological attributes of Mudjesir.

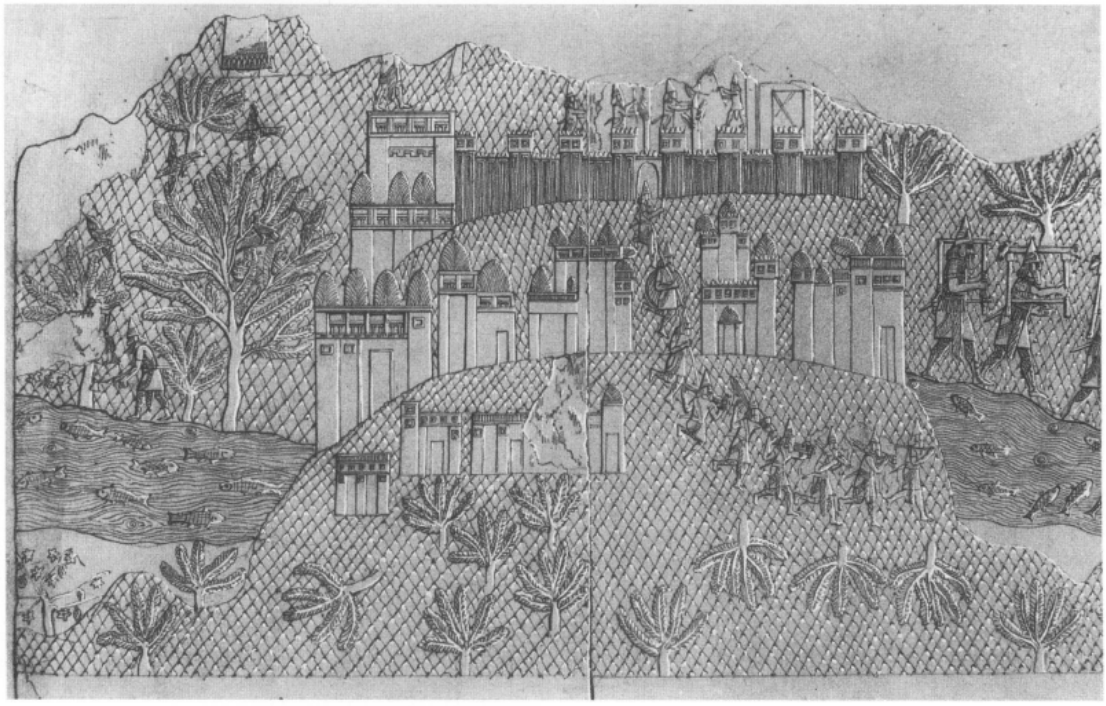


Fig. 6 Room XLVIII, Slabs 11–12. Southwest Palace, Kuyunjik (© Trustees of the British Museum).

Figure 7.5: Sennarcherib's Destruction of Ukku, Room XLVIII, Slabs 11-12. SW Palace. Kuyunjik (Adapted From Jeffers 2011:Figure 6)

Determining the location and the remaining structures requires a close reading of the associated text and joining the archaeological material. The central (Figure 7.6) and right buildings (Figure 7.8) are often interpreted as the Ḫaldi temple and Urzana's palace, respectively. The pitched roof and detailed iconography of the central building and residential appearance of the right building parallel the sack of the Ḫaldi temple and Urzana's palace in Sargon II's Letter to Aššur. The newly uncovered material from excavations at Mudjesir, Qalat Mudjesir, and survey of the surrounding area enables an alternative interpretation. Instead, the Khorsabad relief depicts two separate temples, the central one, described in the text as the Ḫaldi temple[105] and associated with Urartian Ḫaldi iconography, and the right one, depicting a unique version of the archetypical *susi* tower temple. Sargon II's scribes conflated Urzana's palace complex with this temple structure, located at Qalat Mudjesir. The central temple's large platform and spot in the relief's middle indicate a likely position near Mudjesir's excavated drain, a feature covered with a deep stone fill, believed to be a platform's base.

The Khorsabad relief's detailed depiction of the central building alongside the lengthy narrative of Muṣaṣir in Sargon II's eighth campaign text led scholars to focus on the building and its relationship to Urartu (Figure 7.4). The artistic details on the building's face directly connect to probable Ḫaldi iconography, and the textual description of the Ḫaldi temple references features on the building. Among the notable decorative elements are spears, two flanking the main entrance and one at the roof's peak, dual figures on either side of the doorway, and a cow with a suckling calf. While debated,

[105] RINAP 2 65: 367

Ḫaldi's association with a spear appears as a frequent motif in artistic depictions of the god and at excavated temples (Zimansky 2012a). One of the few visual depictions of Ḫaldi on the Anzaf shield shows the god[106] engulfed in flames holding a large spear (Belli 1999, fig. 17; Seidl 2004, 199). In addition, a seal from Ayanis seemingly depicts a figure worshiping an upright spear engulfed by flames (Zimansky 2012a, 718–19). The most explicit connection came from Ayanis, outside the Ḫaldi temple, where excavators uncovered a large spear that directly parallels the doorway spears in the relief. The inscribed object referenced Ḫaldi, and its scale and fragility indicated decorative use, like on the Muṣaṣir relief (Çilingiroğlu and Salvini 1999, 56–58).

[106] Zimansky (2012: 720-721) believes this figure was the king, Išpuini, empowered by the *malammu* of a non-anthropomorphic Haldi, but also associates the spear with the god.

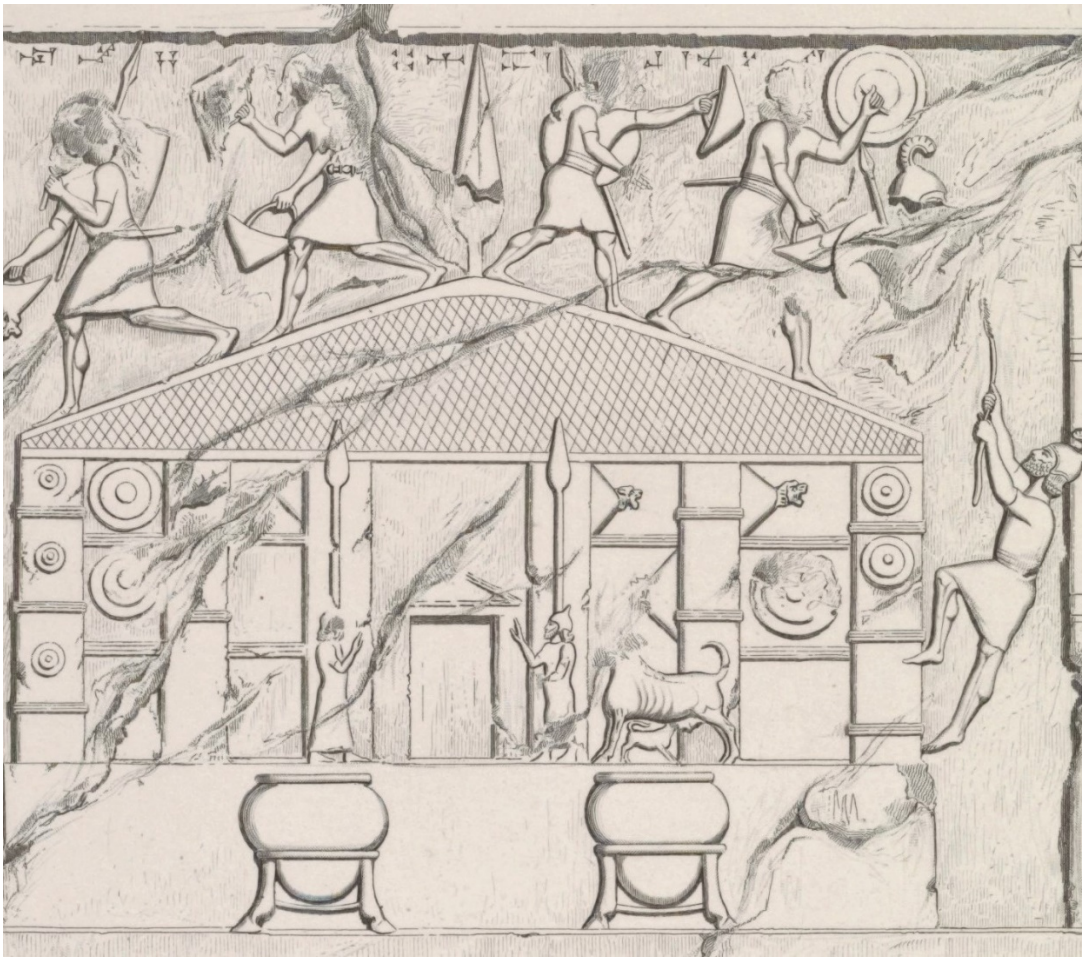


Figure 7.6: Central Portion (Image from Albenda 1986 Pl. 133)

The eighth campaign's listing of booty taken from the Ḫaldi temple records goods connected to two features on the relief, the humans standing at the doorway and the cow with calf. The figures directly parallel the record of "4 divine statues of copper, chief doorkeepers, guardians of his (Ḫaldi's) gates, (each of) whose height is 4 cubits, together with their bases, cast in copper,"[107] with two of the statues in the artistic representation. At the height of four cubits, approximately 2.1 m, the main structure in the relief would

[107] RINAP 2 65: 399

measure around 6 m tall. In addition, Sargon II takes away "1 bull (and) 1 cow, together with her bull calf"[108] made of copper, directly matching the cow and calf on the building's right side.[109] Given that both the text and relief are from the Assyrian perspective, there is no doubt of the building's identity as the Ḫaldi temple. The archaeological linkage of the drain and stone platform connects the location to the text and artistic representation. As the primary temple at the god's holiest city, many suggest the Urartian buildings dedicated to Ḫaldi across the empire replicate the form. However, the replicated Urartian Ḫaldi temple form observed at major sites seemingly does not resemble the Assyrian representation, raising the possibility of the relief's rightmost building's use as a temple.

As the chief deity of Urartu and royal protector, Urartian kings erected Ḫaldi temples at imperial outposts in a highly rigid and uniform style. Excavations of Urartian settlements uncovered at least ten foundations of these temples (Figure 7.7). Called *susi* temples, the closest translation of the Urartian term reads as "tower temple," belying an aspect of their design (Salvini 1979, 581-82). The form of these temples followed a fixed layout with minimal variation. Each temple was square, with a small cella, a single door, and extremely thick walls (Forbes 1983:69). Large stone foundations up to 1.5 m thick, the only surviving floorplans of most temples, served as the structural base for mudbrick walls above. The Urartian builders placed the foundations, often made of limestone or andesite stones, directly on or sunk into the bedrock (Çilingiroğlu 2012, 297, 300). As a

[108] RINAP 2 65: 401
[109] The text notes the statue was dedicated by Sarduri, son of Išpuini. As no Urartian inscription records a king of that patronymic, we must assume that Assyrian author switched the fatherhood of Išpuini and it refers to Išpuini, son of Sarduri, father of Minua.

square, each wall was of equal length, ranging from 10-14 m long (Franke 2018). The height of the mudbrick walls' preservation among the excavated *susi* temples is typically no more than a meter or two, forcing archaeologists to estimate the original height of the structures (Kuşu and Köroglu 2018, 114).

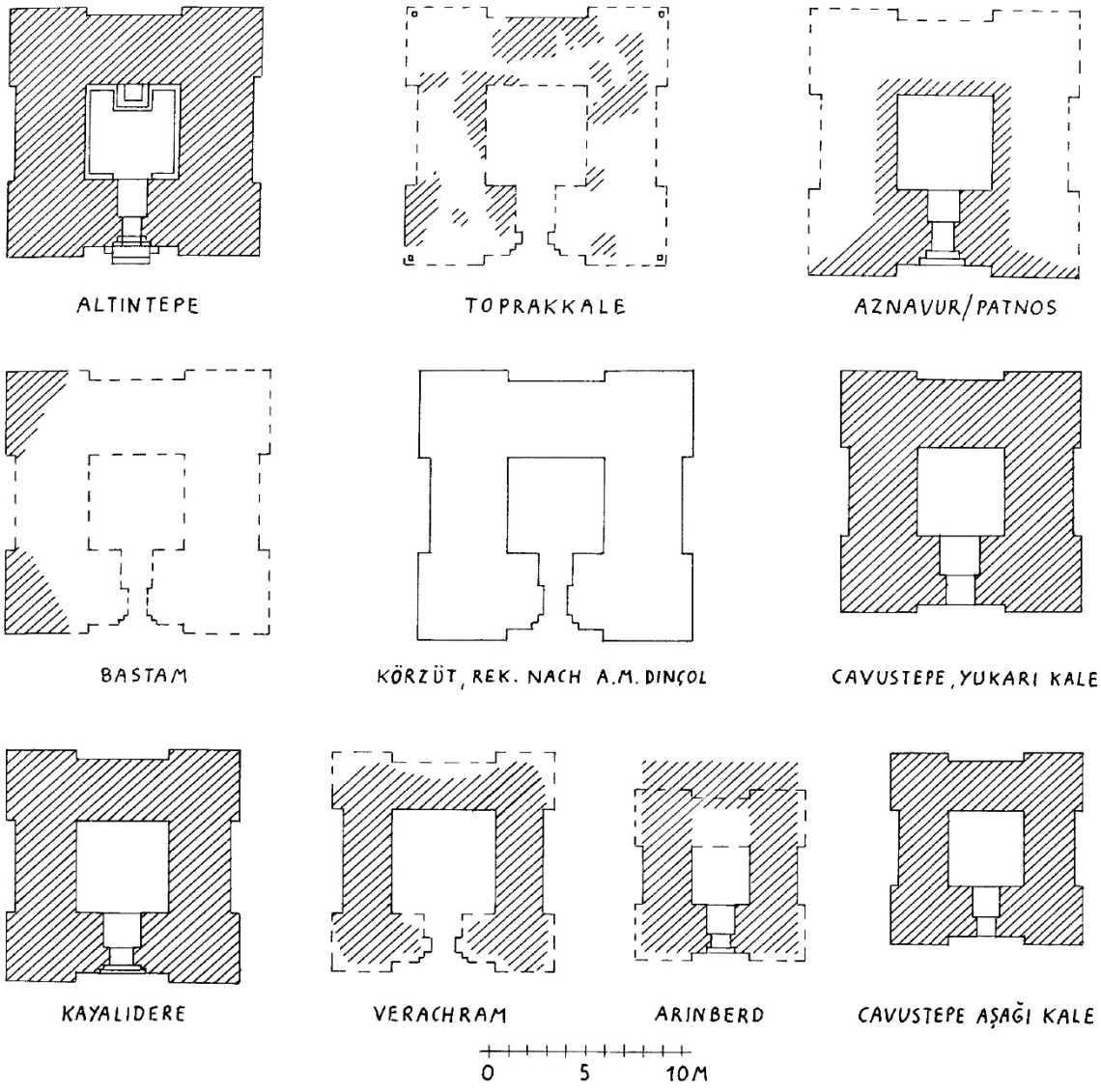


Figure 7.7: Ground Plans of Urartian Susi Temples (Kleiss 1989:Fig. 1)

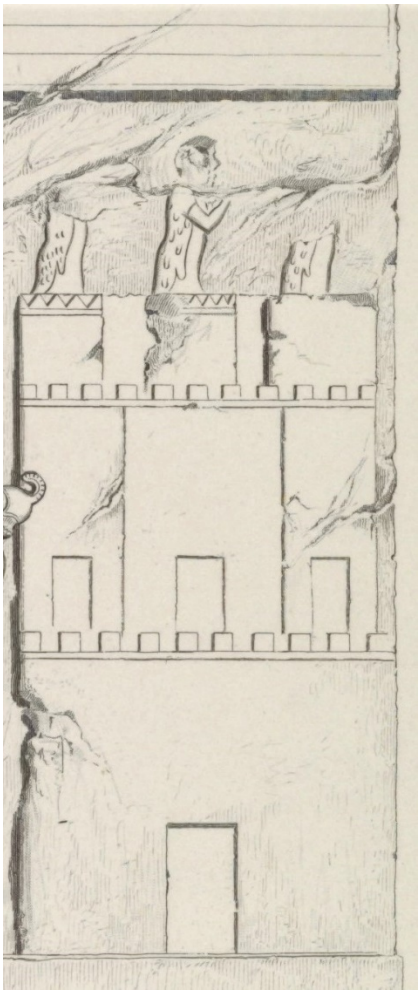


Figure 7.8: (Image from Albenda 1986, pl. 133)

Each corner of the square building was buttressed, and the doorways were rabbeted, often with exterior steps leading to the long passageway through the broad walls into the cella. Cellas were also square, with dimensions of the walls varying between 4.5 and 5.5 m (Franke 2018). While not preserved in all *susi* temple examples, some, like Ayanis, had altars directly opposite the door, believed to be a pediment for a statue of the deity[110] (Forbes 1983, 69; Çilingiroğlu 2001, 42). The cella floor was simple

[110] As Zimansky (2012) notes, the cult representations of Haldi remains unclear. His most convincing argument is that erect spears served as the physical representation of the god.

and smoothed, sometimes with minimal decorations like small stones or alabaster blocks (Çilingiroğlu 2012, 300). The square *susi* temple was in a complex surrounded by a courtyard and a parallel outer wall with dimensions of those complexes' outer walls 21-30 m (Çilingiroğlu 2012, 295). The associated buildings surrounding the *susi* temples, outside the courtyard, consisted of storerooms and monumental residential buildings for the priests (Çilingiroğlu 2012, 305). Thus far, the only examples of these complexes are in walled Urartian citadels adjacent to royal palaces (Forbes 1983, 43).

Without freestanding *susi* temples, archaeologists must reconstruct the buildings using artistic representations, often using Muṣaṣir relief's temple as a guide. The other notable visual depictions of Urartian buildings or temples are on the Adilcevaz relief (Öğün 1967) and bronze Toprakkale model city (Barnett 1950, Plate. 1). The difference between the Muṣaṣir temple's pitched roof and the tall, crenelated towers on the Adilvecaz relief (Figure 7.9) and Toprakkale bronze (Figure 7.10) complicate reconstructions of Ḫaldi temples. Both roof styles cannot exist simultaneously. Reconstructions of the *susi* temple are categorized by attempting to merge the ground plan of the *susi* temples and the visual representation of the Muṣaṣir Ḫaldi temple versus using iconography from the crenelated Urartian art to illustrate tower temple buildings. Relatedly, some scholars of Urartu insist on two variations of Ḫaldi temples, the square *susi* type from excavated Urartian imperial citadels and a unique type shown on the Khorsabad relief (Herzfeld 1941; Kleiss 1963; 1989). Belief in one *susi* type, typified by Sargon II's depiction of Muṣaṣir, or two separate versions influenced the reconstructions

of the square *susi* temples' upper levels. A second Urartian temple variation is consistent with an interpretation of the Khorsabad relief's rightmost building as a *susi* temple.

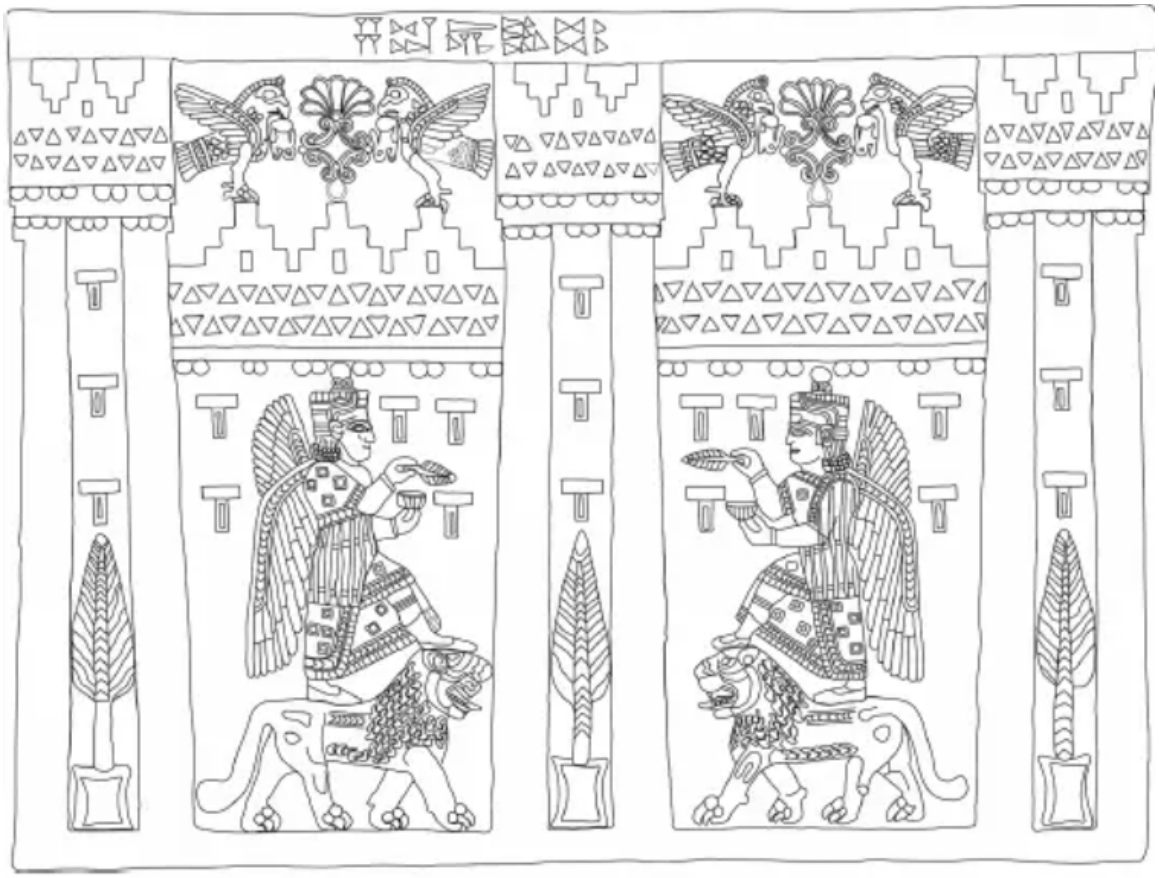


Figure 7.9: Adilcevaz Relief (Öğün 1967, Adapted from Kuşu and Köroglu 2018:Figure 2)

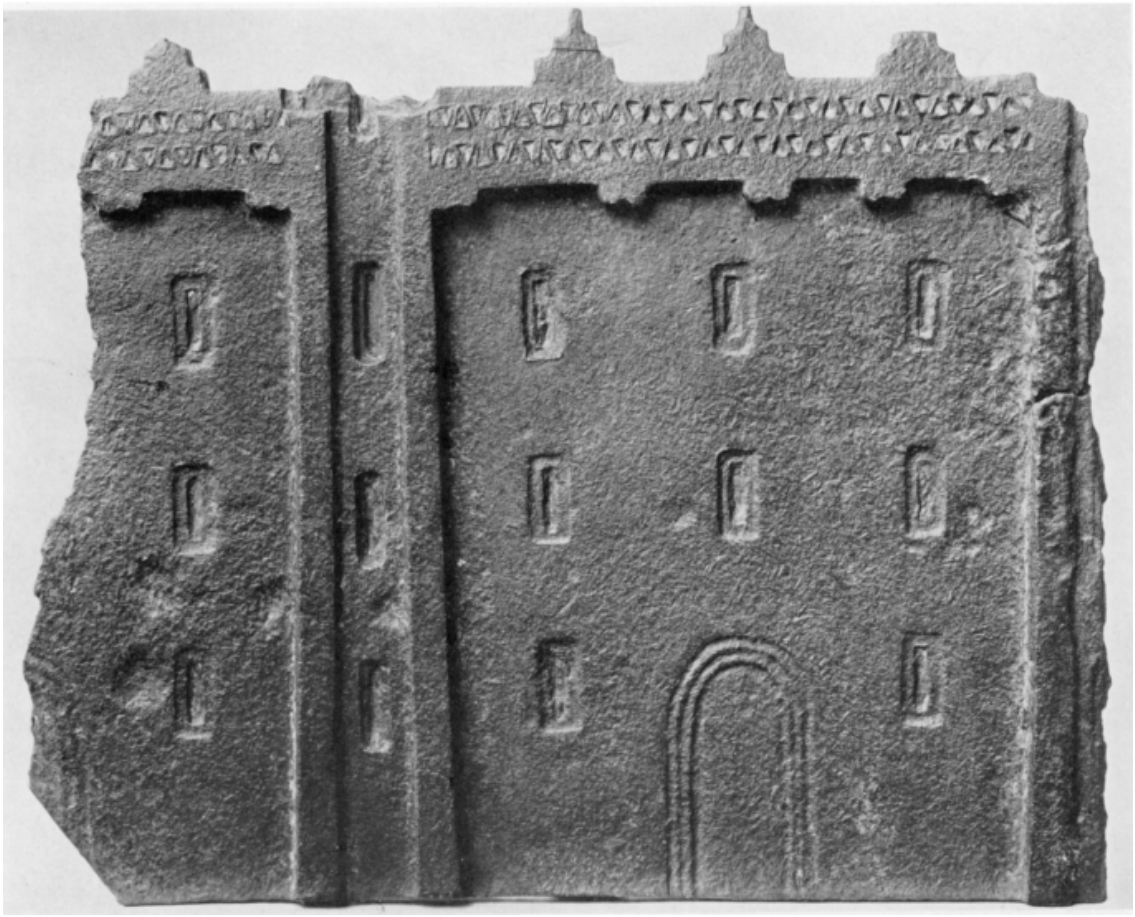


Figure 7.10: Bronze Model City from Toprakkale (Barnett 1950:Plate 1)

One category of *susi* temple reconstructions that does not explicitly match the Muṣaṣir relief depicts the temple with tall towers and a flat roof. Tahsin Özgüç's (1966, fig. 1) reconstruction of the *susi* temple at Altintepe was a square building with large flat towers on each corner, surrounded by columns and a flat-roofed portico (Figure 7.11). Another version, illustrating Toprakkale's *susi* Ḫaldi temple, envisioned a tall structure with buttresses and extensive crenellation but did not believe the buttresses supported a tower higher than the main building, following the Toprakkale bronze model (Akurgal 1968, 15). Kleiss's interpretation of the *susi* plan evolved over the decades, from 1968 to 1989. Kleiss's later article (1989) argued Urartian *susi* buildings were distinct from the

Muṣaṣir Ḫaldi temple's design, with no pilaster structure or pillars at its front (Figure 7.12). The overall form of the temple mirrored Özgüç's, a tall square building surrounded by a flat-roofed portico. He reconstructed four variations of the roofs, following the three representations on the Toprakkale bronze, Khorsabad, and Adilvecaz reliefs, plus one combination of a crenelation and a pitched roof (Kleiss 1989, 266). Sevin's (2003, 216) version of the *susi* at Cavustepe had four towers projecting above the central building, like Özgüç's, but with triangular dentils and crenelation like that of Akurgal. The most recent reconstruction, made with 3D visualization tools, modeled the whole of the Altintepe citadel, including the temple complex, adjacent mansion, and fortification walls (Kuşu and Köroglu 2018). The modeled *susi* building follows the design of the Adilcevaz relief and Toprakkale bronze, with four crenelated towers with dentils, 9 m tall, four small windows above a large arched doorway (Figure 7.13) (Kuşu and Köroglu 2018, 114-115).

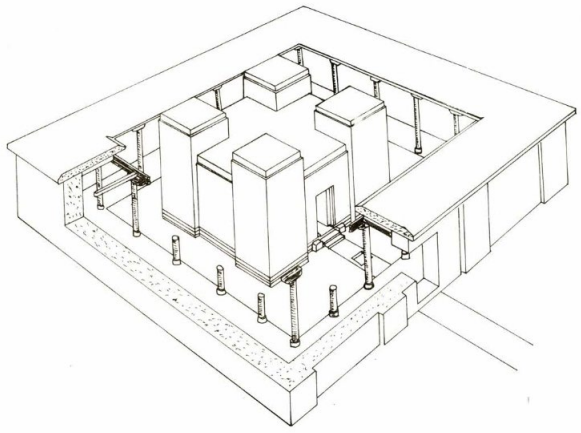


Fig. 47 Özgüç reconstruction of the temple at Altintepe, Turkey (Özgüç, 1967, p.46).

Figure 7.11: Ozguc's Reconstruction of the Altintepe Temple (Reproduced from Forbes 1983, Figure 47)

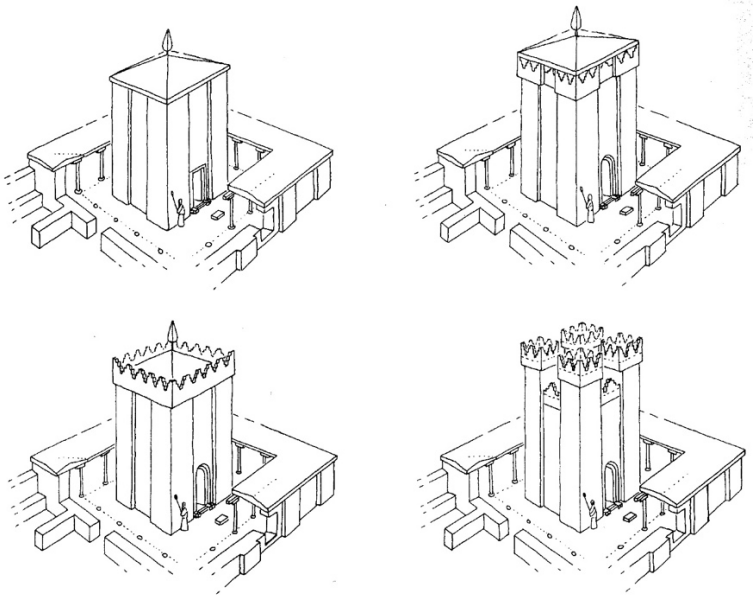


Figure 7.12: Four Reconstructions of the *susi* Temple (Kleiss 1989: Figure 1)

Figure 7.13: 3D Reconstruction of the *Susi* Temple from Altintepe (Kuşu and Köroğlu 2018:Figure 8)

The other category of *susi* temple alternative reconstructions proposes that the Ḫaldi temple of the Khorsabad relief followed the same architectural plan and style as the entirety of Urartian temples throughout the empire. Kleiss's (1963, Figure 8) first attempt at a reconstruction precisely followed the Assyrian depiction of the temple, adding only an outer portico, front stairs, and perspective to the temple. While he later proposed an alternative view, the explicit translation of the relief into a three-dimensional perspective continues to be valuable in understanding a realistic depiction of the temple on the relief (Figure 7.14). Naumann (1968, 53) followed the Muṣaṣir illustration but added additional details like four windows on the front façade. In Forbes's (1983, 95) comprehensive treatise on Urartian Architecture, he proposes the Muṣaṣir temple was a slight deviation from the typical *susi* tower-style temple, with characteristics seen in Kleiss's 1963 reconstruction, but the plan generally followed the typical Urartian style. Çilingiroglu (2012, 525) rejected the division of Urartian temples into excavated *susi* temples and the Muṣaṣir Ḫaldi temple. His evidence included an inscribed bronze lion-head shield found near the Ḫaldi temple at Ayanis, with striking visual similarity to those on the Khorsabad relief and used as proof for a single temple style with pyramidal roofs. Franke (2018) did not offer a visual reconstruction but instead argued that Sargon II's artists pulled forward perspective, taking liberties with the side walls to bring their view to the front. With the argument of altered perspective, the decorative features on the Ḫaldi temple at Muṣaṣir can be directly extrapolated to the *susi* temple, effectively following Kleiss's 1963/1964 reconstruction.

Fig. 52 Kleiss' reconstruction of the Musasir temple (Kleiss, 1963/64, Figure 8).

Figure 7.14: Kleiss (1963/1964) Reconstruction of The Muṣaṣir Ḫaldi Temple (Reproduced From Forbes 1983, Figure 52)

The arguments for equating the central building on the Khorsabad relief with the Ḫaldi temple of the text and the archaeological excavations at Mudjesir seemingly confirm the placement of the building at that spot. However, the *susi* foundation form is unrepresented at that site, and the difficulties with equating tower temple layouts to the Ḫaldi temple are well documented. The recent excavation of Qalat Mudjesir provides evidence consistent with a temple structure resembling the Urartian *susi* style. While Michael Danti's report is forthcoming, the building's interior and architectural construction are completely incongruous with a fortress or palace. Instead, the general characteristics match the typical *susi* temple plan, with minor but noteworthy differences.

Like the excavated *susi* temples, the Central Building at Qalat Mudjesir consisted of large stone foundations with buttressing. The two longer sides, to the west and east,

each had five buttresses. On the eastern wall, near the corner with the northern wall, was an off-center doorway. The building's interior was almost entirely empty, with evidence of a high-temperature burning event and contained burned debris. Clay from the destruction was impressed with reed and grass, likely from the structure's roof. While not a square, the buttressing, stone foundations, position at the center of a hilltop complex, and parallel walls of the Outer Bailey match the characteristics of a *susi* temple. The excavations of the sites at Mudjesir raise two questions relevant to Urartian religious architecture: Was Qalat Mudjesir a *susi* style temple for Ḫaldi? Could the central building on the Khorsabad relief depict Qalat Mudjesir rather than a structure in the Mudjesir lowlands?

The first question of Qalat Mudjesir's possible identity as a *susi* temple runs against the conspicuous difference between its rectangular plan and the square plans of *susi* temples. The temple's measurements and positioning of its buttressing are consistent with a unique "quad-style *susi*" temple, a hence undocumented style of Urartian architecture. Qalat Mudjesir's Central Building measures approximately 40 m x 13 m, with walls approaching 2 m in thickness. Overlaying a hypothetical square *susi* temple with 10 m long sides over each quartet of buttresses nearly perfectly aligns with the Central Building of Qalat Mudjesir (Figure 7.15). Effectively, this arrangement of buttresses is four *susi* temples connected, with the adjacent walls removed. Intriguingly, this suggests the single off-center door continued the traditional *susi* layout, but the northern square served as the entrance for the remaining three *susi* layouts. Thus, rather than one *susi* temple, the structure was four times the size but followed the architectural

design of the archetypical structures across Urartu. Reasonings for the four-part temple structure or possible uses are completely speculative and will require further research. Apart from the unique quad-style *susi* layout, the building exhibits the typical features of a large stone foundation supporting mudbrick walls, buttressing, and an outer wall delimiting the temple complex. In addition, all of the known *susi* temples were on hills or mountains, visible from some distance away (Çilingiroglu 2012, 295). While the rest of the site remains unexcavated, the scale of the outer fortification wall and the Central Building's relative placement are similar to the *susi* temple at Altintepe.

Once established that Qalat Mudjesir's Central Building was a *susi* style temple, the pertinent question is whether that structure is the same Ḫaldi temple depicted on the center of the Khorsabad relief. One issue is this equating is the symmetrical facade depicted by Sargon II's artists, compared to the quite offset door of Qalat Mudjesir. While Qalat Mudjesir's building could, in theory, have a pitched roof like the building from the eighth campaign, an angled roof of 20° (as on the relief), 40 m in length would be an impressive engineering feat, with the roof ridge 6 m above the walls. Using the four cubit height of the statues as a scale, the entire height of the structure would reach 18 m. Such a towering structure would undoubtedly be depicted, highlighting its vertically instead of the somewhat squat temple on the relief. Further, while the Assyrian artists took creative liberties with perspective, their depiction of the Ḫaldi temple leaves out the multi-tiered hill and walls surrounding Qalat Mudjesir's central building. Sennacherib's depiction of Ukku's sack, a similar mountainous kingdom to Muṣaṣir, portrayed that urban center as unwalled except for the uppermost citadel (Jeffers 2011:90-94). Even

with the style of Sennacherib's father, Sargon II, the representation of the central building on the Khorsabad relief is incongruous with the Qalat Mudjesir excavated remains.

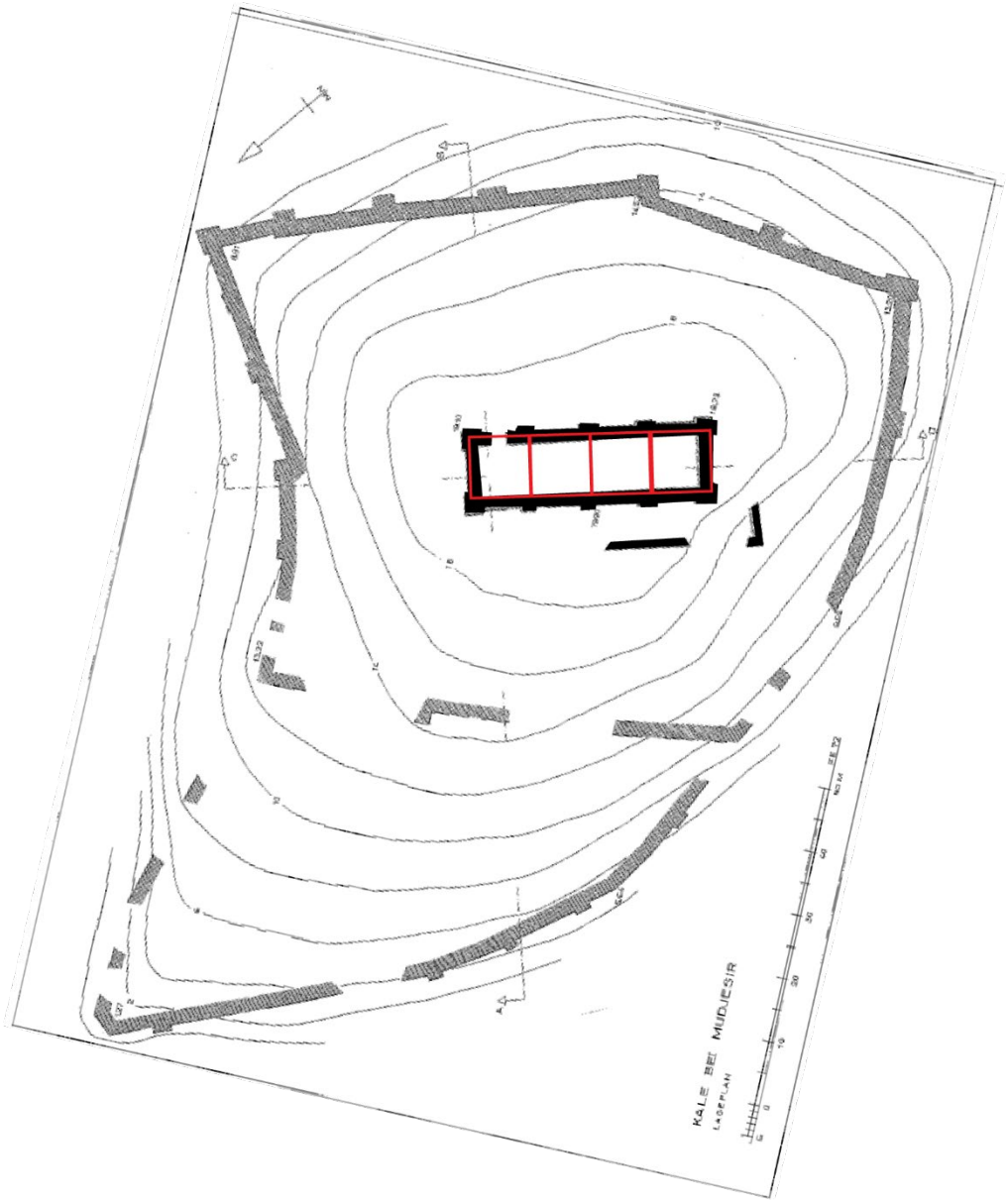


Figure 7.15: Overlaid Possible Susi Design over Qalat Mudjesir (Adapted from Boehmer and Fenner 1973)

The proposed alternative is that the right building on the Khorsabad relief represents Qalat Mudjesir. In the same slab from Sennacherib's palace at Kuyunjik

detailing the destruction of Ukku, Jeffers (2011, 106-7) proposes a structure in the upmost citadel was an Urartian *susi* tower temple (Figure 7.5). While barely visible, the building's general shape aligns with the single building of Ukku. Despite the simple architectural visualization of Muṣaṣir's right building, its top appears to have three towers with crenellation and dentils on their peak more similar to the Adilcevaz relief and Toprakkale bronze than the residential buildings on the left.

The central building of the relief then represents another version of the Ḫaldi temple, the one described by Sargon II in the inventory of plunder but still undiscovered. Entering from the west, the topography of Mudjesir would dictate the central building, the Ḫaldi temple, which lie in the center of the small valley surrounded by the settlement of Muṣaṣir. Both the relief's depiction and the text's iconography align with the central building, but the question arises of why Sargon II's eighth campaign text is absent references to a second temple of the *susi* type. One explanation for this omission is that the Assyrian invaders incorrectly identified the complex at Qalat Mudjesir as Urzana's palace.

Among the possible justifications supporting Sargon II's misidentification of Urzana's palace is the vast quantity of loot taken away from the palace. Albeit far less than that in the Ḫaldi temple, the Assyrians took away 167 talents of silver, copper, and tin.[111] While not an extraordinary quantity of fine goods, the natural resources and wealth around Sidekan likely did not allow the Muṣaṣirian king to amass such wealth without the sponsorship of the Urartian king or as tribute in pilgrimages to the Ḫaldi temple. Further,

[111] RINAP 2 65: 350

Urartian palaces were often near temples, terraced or on low hills, describing Qalat Mudjesir (Forbes 1983:42-46). Rather than a vast defensive citadel for defense and control of surrounding areas that Urartian kings built in their expansionary activities, Qalat Mudjesir is more comparable to Altintepe. That site was primarily religious, with a large temple complex covering most of the walled area, surrounded by smaller buildings believed to support the temple's activities (Karaosmanoğlu and Yılmaz 2014). Urzana's role at Muṣaṣir, under the indirect control and influence of the Urartian kings, was as a custodian of Ḫaldi, and his kingship was undeniably predicated on that support. Thus the Muṣaṣirian royal complex supported the temple activities, not as an independent entity for the king's enjoyment. The scant depiction of the palace-*susi* complex on the right of the Khorsabad relief may be explained by Sargon II's intense focus on the Ḫaldi temple or an absent understanding of Urartian-style architecture. The relevant takeaway from the proposed *susi* temple with Urazana's palace is the existence of two Ḫaldi temples at Muṣaṣir in different styles. The central Ḫaldi temple may reflect a preexisting Muṣaṣirian cult to Ḫaldi, while the right's unique *susi* style would serve as the archetypal example of Urartian architecture. The possible reasons for the existence of a dual temple connect to the founding of the Urartian religious cult and the early history of Muṣaṣir.

Origins of Muṣaṣir, Ḫaldi, and Urartian Religion

One of the continually perplexing questions in Urartian scholarship is the origin of the ruling dynasty and, relatedly, their relationship to Ḫaldi (Kroll et al. 2012, 105). The dawn of the Ḫaldi cult in Muṣaṣir directly relates to the beginning of the Urartian dynasty, as the reasons for Ḫaldi's position at the top of the Urartian pantheon directly

follow from interpretations of the king's ancestry. If the Urartian royalty originated from Muṣaṣir or nearby areas, migrating to Lake Van and founding their dynasty, the existence of Ḫaldi is explained easily by that hereditary veneration. However, if Lake Van and its surrounding environs began the dynastic tree, Ḫaldi's position as the supreme god is more inexplicable, likely the result of a deliberate program of constructing a comprehensive imperial ideology.

Many of the arguments for an Urartian ancestral homeland nearby Muṣaṣir rely on the king's reverence as Ḫaldi as evidence, but removing that connection reveals a relative paucity of data in support of that hypothesis. The Muṣaṣir ancestral relationship relies on a location for the early Urartian royal city of Arazškun south of Lake Urmia, references to an ancestral city in Sargon II's Letter to Aššur, the coronation of the crown prince at Muṣaṣir, and possible connections to Bronze Age Turukku and Kakum, introduced for the first time in this dissertation (to my knowledge).

Shalmaneser III's campaigns against Urartu signify the emergence of the empire on the world stage as a major threat to the Neo-Assyrians and provide multiple toponyms with contextual information regarding the earliest Urartian occupation. Specifically, Shalmaneser III's 3rd year campaign in which he defeats the first recorded Urartian king, Arame, and destroys the "royal city" of Arzaškun, subsequently traveling to Gilzanu and Ḫubuškia. [112] As the earliest reference to a royal city of the Urartians, Arzaškun's location naturally provides insights into the homeland of the ruling elite. The path of Shalmaneser III's earlier campaign, in his ascension year, overlaps with the toponyms of

[112] RIMA 3 A.0.102.2, ii 14-25

the 3rd campaign, triangulating Arzaškun's position. That campaign moved from Ḫubuškia to a "fortified city of Aramu the Urartian" called Sugunia, down to the sea of Nairi (Lake Urmia), receiving tribute from Gilzanu on his return to Aššur.[113] Ḫubuškia, as discussed in the section on Sargon II's route, likely lay in the vicinity of the Gawra Shinke Pass and Piranshahr. Sugunia's location is in the southern Lake Urmia region (Salvini 1995, 28; Schachner 2007; Fuchs 2012, 138). Gilzanu, likewise, was either based around the site of Hasanlu (Reade 1978) or further east towards Mahabad or Miandoab (Kroll 2012b, 166). Despite the parallel toponyms, Arzaškun's location is under far more extensive debate.

Despite the accompanying toponyms from southern Lake Urmia suggesting Arzaškun was located nearby (Salvini 1995), the preceding locations of Shalmaneser III's route indicate the journey began in the west before moving east and southwards to Lake Urmia. The start of the campaign passed cities like Mutkinu, on the bank of the Euphrates, and Bit-Zamani, located in the Euphrates headwaters of the Taurus Mountains (Kroll 2012b, 167). Traveling east to Lake Van and subsequently to the western coast of Lake Urmia is consistent with the known concentration of later Urartian fortresses and the well-trodden road from Van to polities in the south of Lake Urmia like Ḫubuškia. Despite Salvini's (1982, 1995) and Haas's (1986, 23, 26) suggestion of Arzaškun's location in the proximity of southern Lake Urmia, recent publications by Urartian philologists and archaeologists advance that the royal city was in Van (Burney & Land 1971, 127-130; Russell 1984, 198; Zimansky 1985, 48-50; Burney 2002; Kroll 2012b).

[113] RIMA 3 A.0.102.2, i 18-29

Further, excavations of Karagündüz by Sevin (2003, 1999) uncovered a material culture in the early Iron Age with direct connections to those that arose with imperial Urartu in the succeeding centuries. In contrast, the extensively studied early Iron Age material culture of southern Lake Urmia does not possess the same continuity to Urartu (Kroll 2012b, 167; Danti 2013).

An additional argument for a southern Urmia origin of Urartians comes from another Neo-Assyrian text, more than a century later. A passage in Sargon II's eighth campaign describes the "ancestral city"[114] of Rusa as Arbu, a city in Armarijali near Lake Urmia, resulting in the proposed location of Armarijali as the origin of the Urartian elites. However, if Sargon II's adversary was Rusa Erimena, a usurper to the Urartian throne, Arbu may refer to that specific kings' homeland rather than the whole of the Sarduri dynasty (Chapter 2). The same line in the text also describes a city, Riyar, "Ištar-duri's [Sarduri's] city" but does not use the same qualifier of the ancestral city. The following lines note his royal family resided in their environs, but the subject of the possessive is unclear in this context. Given the preponderance of Sarduri cities around Urartu founded during his expansionary process, the reference to a Sarduri city alone is insufficient evidence for the town's location as the Urartian homeland.

Further proof of an ancestral connection is the belief in the process of selecting the next Urartian ruler at Muṣaṣir. This argument relies, in part, on the oft-cited belief that the Urartians crowned the crown prince at Muṣaṣir, a likely overinterpretation of a passage in the eighth campaign text (Kroll et al. 2012, 28). Sargon II's text stated that

[114] RINAP 2 65, 277

"the prince, the shepherd of the people of the land Urartu they bring him and make the one among his sons who was to succeed to his throne enter into the city Muṣaṣir..." "In front of his god Ḫaldi, they place upon him the crown of lordship and have him take up the royal scepter of the land Urartu." [115] While the Assyrian text seemingly describes this ceremony, the Kelishin Stele does not parallel those activities, and evidence of an Urartian crown prince remains debated. Apart from the inscriptions of Išpuini and Minua that imply Minua's deputized role comparable to a crown prince, only one other Urartian prince appears alongside his father in royal inscriptions. The name of Minua's only son, Inušpua, occurs in some of the texts from the latter period of Minua's reign, but that person never ascends to Urartian kingship. Instead, his assumed brother Argišti takes the throne (Fuchs 2012, 102-106). If the king brought a son to Muṣaṣir for coronation as crown prince, the practice was seemingly short-lived and undocumented in Urartian inscriptions. Even assuming the Urartians enthroned their royal line at Muṣaṣir, the proposed ancestral connection still relies on the city's holiness, a circular argument in explaining Muṣaṣir's importance.

A final datum of evidence supporting the Urartian king's original genesis around Muṣaṣir and Lake Urmia comes from Chapter 2 of this dissertation's study of the Turukku and Kakmum. As a brief synopsis of the presented evidence, the Turukku were an ethnically Hurrian confederation of minor kingdoms under the leadership of a single Turukku king, often ruling from the city of Itabalḫum. Reconstructions of the historical geography of the Early Bronze Age place the Turukku in the series of valleys south of

[115] RINAP 2 65, 338-340, 342

Lake Urmia, although archaeological excavations in survey have yielded no corroborating evidence. The possible connections of the Turukku to Urartu and its founders are both ruling classes' Hurrian linguistic identity and the confederated nature of the kingdom. However, while Zimansky (1985, 48-9) postulates the Assyrian pressure of raids forced the consolidation of independent kingdoms into a single Urartian state, that dynamic parallels merely parallel the Turukku. Occurring centuries later, there is no reason to believe a repeat of the political fabrication requires an ancestral connection.

An enemy of the Turukku, the nearby polity of Kakmum disappeared in the Bronze Age, but a derivation of its name reappeared centuries later during Sargon II's campaign against Urartu. While Kakmum's location is more debated, possible locales are the Pishder Plain, somewhere south of Rania, or the area around Rowanduz and Soran. Compared to the Turukku, however, the Kakmum people appear more often in the texts and politics of Mesopotamia, implying closer proximity to the alluvium. Unlike the Turukku's sedentism, the Mesopotamian author's impression of the Kakmum people was as a dangerous and nomadic warrior people engaging in raids and attacks. After the final references to Kakmum during the Old Babylonian king Samsu-Iluna's reign, the historical record is silent until Sargon II's series of campaigns into Iran. In addition to the descriptor of Urartu as the land of Kakmê in the Letter to Aššur, three other texts use the term, apparently adopting their Mannean allies' name for the polity. As occupants of areas originally adjacent to the proposed Kakmum lands, the Manneans may have had ancestral familiarity with the people of Kakmum. If the people of Kakmum resided nearby Muṣaṣir and migrated to Lake Van, the Manneans may have used the archaic term

for the Iron Age kings. However, this interpretation relies on the scant evidence regarding the use of the term, constrained only to Sargon II's reign and lacking any context of Mannean toponymic etymology.

If the Urartians did not originate in the area surrounding Muṣaṣir but rather expanded from an ancestral homeland around Lake Urmia, the reasons for Ḫaldi's position at the head of their pantheon are less clear. The apparently deliberate elevation of the god suggests the Urartian kings chose the deity for some reason, possibly his ethnic associations, location of the cult center, or the existing trans-national worship. Despite Ḫaldi's importance in the Urartian religious and imperial system, he emerges only under the dynasty's third recorded king, Išpuini, son of Sarduri (Salvini 2008:95). Mirjo Salvini (1987, 402; 1989, 83–85) proposed that Išpuini intentionally initiated Ḫaldi's worship alongside Urartu's imperial expansion. Although Sarduri's corpus is limited to two texts neither mention Ḫaldi nor other gods, leading to the theory that the quantity of references to Ḫaldi in Išpuini's texts indicates the deity's likely introduction to Urartu (Diakonoff 1981, 82; Kroll et al. 2012, 28). Ḫaldi's introduction into the newly formed Urartian religious pantheon as its paramount deity coincided with Urartu's expansion into a transnational and ethnic state, its border expanding far south to the Ushnu plain, across the Zagros Mountains from Sidekan. Muṣaṣir's relationship with Ḫaldi and the Urartian suggest a preexisting Ḫaldi cult with Urartian kingship inexorably altering the development of the kingdom and region.

Two inscriptions from the dual reign of Išpuini and his son Minua, the Kelishin Stele and Meher Kapisi, illustrate the process of Ḫaldi's elevation to the head of the

pantheon. The Kelishin Stele contains a dedication to Ḫaldi and a description of Išpuini and Minua's journey to Muṣaṣir to present the god with offerings (Mayer 2013, 46). Its invocation of Ḫaldi's wrath on whoever disturbs the stele as the primary god presents evidence for the god's newfound importance. More directly, the Meher Kapisi inscription, a text at an open-air sanctuary near the Urartian capital city of Tušpa, lists sacrifices to the entirety of the Urartian pantheon in order of importance (Diakonoff 1983, 191–93). The order and quantity of offerings to each god established the ranking of each deity. This text, erected after the events in the Kelishin Stele, establishes Ḫaldi as supreme among the newly minted fraternity of Urartian gods (Salvini 1994).

While neither text confirms Ḫaldi's elevation began under Išpuini and Minua, the archaeological evidence paralleling their expansionary campaigns establishes the Urartian royalty's newfound access to Muṣaṣir. Inscriptions bearing the dual names of Išpuini and Minua record the erection of fortresses like Qaletgah and Qaleh Ismail Aqa on the north and western shores of Lake Urmia (Salvini 2004, 65–67). The creation of these fortresses was contemporaneous to the writing of the Meher Kapisi text, which Salvini (1994) sees as the initiation of an imperial religious system.

Ḫaldi's elevation as the supreme god in the pantheon corresponded to a deliberate propagation of Urartian religious hegemony over subdued domains. As the Urartian kings expanded their territory, they colonized newly conquered areas through an elaborate network of fortresses (Smith 2012, 41–42; Earley-Spadoni 2015). Unique among the states and conquerors of the Ancient Near East was the Urartian erection of near-identical *susi* temples to their supreme god in each territory, imposing their religion as part of their

hegemony. In addition, the Urartian state apparatus supported the religious complexes of Ḫaldi temples in Urartian towns and fortresses, as opposed to the thriving temple economies common in Mesopotamian cities (Diakonoff 1983, 303; Salvini 1989, 86; Petrosyan 2004, 6).

While aligning historical events with archaeological dates can be problematic, the data from Mudjesir excavation may contain evidence of the founding of the Urartian religious system. The radiocarbon date of the charcoal in Mudjesir's drain dated from 895-833 BCE (Chapter 5). As discussed, the old wood problem in radiocarbon dating results in dates that often predate the actual use and burning of the carbon material by decades. Contextually, the drain's use for emptying water would presumably wipe away small charcoal remains like the recovered sample. Thus, usage of the drain ended sometime in the mid to late 9th century. That data point provides an indirect connection to Išpuini and Minua's pilgrimage. However, the cessation of use for the drain suggests either abandonment or construction of a new building. Abandonment is unlikely, given the Kelishin Stele's emphasis on Ḫaldi and Muṣaṣir and the homogenous stone fill suggests a foundation or platform at the site. Instead, the termination of the drain may indicate rebuilding of an existing temple, present before the rise of the Urartian state and concurrent to the occupation of structures at Gund-i Topzawa East.

Assuming the accuracy of the above interpretation provides insights into the beginning of the Urartian Ḫaldi cult and the preexisting worship of the god in Muṣaṣir. The excavations and survey in Sidekan add the possibility of construction activity concurrent to the journey commemorated in the Kelishin Stele. The bilingual inscription

notes they placed a shrine for Ḫaldi on the road and erected the inscription.[116] Although there is no evidence for the type of shrine constructed, a structure comparable to Meher Kapisi is a tempting parallel. A later line also describes placing a "*tūru*"[117] in front of the gate of Ḫaldi. Although the meaning of *tūru* is unknown, the gate of Ḫaldi may refer to the main temple in Muṣaṣir, raising the possibility of Išpuini and Minua's construction or reconstruction of an existing temple. Reference to two statues in the Letter to Aššur also suggests the construction or rededication of the temple. A bronze statue of the king of Urartu praying and the copper statue of a bull, cow, and calf were both inscribed in honor of Sarduri, son of Išpuini.[118] As there is no Urartian reference to a son of Išpuini named Sarduri, the logical conclusion is that the Assyrian scribes switched the patronymics on the looted statues. These objects likely accompanied the pilgrimage and elevation of Ḫaldi by Išpuini and would support a rebuilding or remodeling of the existing Ḫaldi temple.

While the Kelishin Stele's mention of a Ḫaldi temple at Muṣaṣir established an existing temple in the kingdom, the archaeological evidence suggests a monumental structure at the location. The Assyrian references to a holy city reinforce a burgeoning and powerful cult before the growth of Urartu. Mudjesir's drain's possible association with a temple or another cult-related structure alludes to a divine municipality existing at least by the mid 9th century. Radiocarbon dates from Gund-i Topzawa East establish the region was occupied at least centuries earlier, in the 13th century BCE. The Middle

[116] CTU A 03-11: r1-5
[117] CTU A 03-11: r10
[118] RINAP 2 65: 400

Assyrian campaign texts of Adad-nirari I, Shalmaneser I, and Tiglath-pileser I provide early connections between Muṣru/Arinu and a holy city, a strong indication of cult activities in the area centuries before the rise of Urartu or Na'iri. Two Middle Assyrian personal names from the 13th century, Kidin-Ḫaldi and Ṣilli-Ḫaldi, contain the theophoric element of the god, despite the absence of references to Ḫaldi or any specific deity in the accounts of the royal campaigns against Muṣru (Finkelstein 1953, 115).

Before Išpuini's pilgrimage to Muṣaṣir and concurrent to the radiocarbon date of the Mudjesir drain, the kingdom sent envoys to attend Aššur-nasirpal II's festivities at Kalhu (883-859 BCE). Thus even before the Urartians elevated Ḫaldi, the god and his residing kingdom held some notoriety in the region. Even after the Urartian adoption of Ḫaldi, non-Urartian regions worshiped or revered the god. Neo-Assyrian personal names, beginning in the 8th century and continuing to the 6th century, continue the tradition of including Ḫaldi, as the god's name prefixed at least ten individuals in texts of the period (Chapter 2). To the west, Ḫaldi's name appears in Aramaic on the Bukan stele, part of Mannea, although chronologically concurrent to the deity's importance in Urartu (Fales 2003, 136–38). Ḫaldi and Muṣaṣir were not, therefore, uniquely associated with Urartu. Their rationale for elevating Ḫaldi may lie in the god's ethnic association or his association with many neighboring cultures.

A possible rationale for Išpuini's selection of Ḫaldi as the supreme deity was not a shared ancestral connection but a connection between the god and the Urartian ruling elite's Hurrian ethnicity. The shared etymology of Urartian and Hurrian suggests the ruling class belonged to the same ethnicity or originally migrated from similar regions.

While Salvini (1995, 26-27) raised the possibility that the root of Arame's name indicated the ruling class merely adopted the language in their role as conquerors, their cultural associations support a Hurrian connection. The second and third-ranked gods in the religious hierarchy, codified at Meher Kapisi, are the major Hurrian gods, Teišeba, the Urartian spelling of the Hurrian storm god Tešup/Teššub, and the sun god Shiuini, Hurrian god Simigi (Salvini 1995, 187). Shiuini's consort, Tušpue, was associated with the Urartian capital Tušpa, where her cult center was likely based (Salvini 1995, 187). However, Ḫaldi's Hurrian connection is dubious at best. The deity's name is not of Hurrian etymology, and Ḫaldi's name does not appear in any Hurrian texts from the second millennium, in either the Hurrian or derivative languages like Hittite (Salvini 1989, 83). Despite that, Ḫaldi's name occurs alongside Assyrian or Aramaic. Furthermore, the name of Ḫaldi's consort does not assist in the etymological study, as she was named Bagbartu[119] by the Assyrians or Arubani[120] by the Urartians, mirroring each language's linguistic origins (Kroll et al. 2012, 29).

Apart from the association of Ḫaldi with the Urartian pantheon, a link between Ḫaldi and Mithra/Mitra provides the most substantial evidence of Ḫaldi's Hurrian origin. Armen Petrosyan (2004) argues for the shared origins of Ḫaldi and the Armenian deity Mithra. Among the reasons is the name of Meher Kapisi, translated as "The Gate of Meher," which directly parallels the Urartian description of the shrine in the inscription as the "Gate of Ḫaldi" (Petrosyan 2004, 1–2). Ḫaldi's evolution and merging with Meher is further confirmed by the description of Meher Kapisi on the "Raven's stone" in the

[119] RINAP 2 65: 368, 385, 391
[120] CTU A 03-01: 68

literary Epic of Sasun, describing the origin of Meher. A seal of Urzana describes Muṣaṣir as “the city of a raven,”[121] directly merging the two deities' iconography (Radner 2012:247). Petrosyan argues that Meher and Mitra refer to the same deity, Mithras/Mitra of the Achaemenid and Roman periods, observed through early 1st millennium CE synchronizations and similar characteristics (2004, 2–3, 6–7).

An Armenian connection to Ḫaldi is intriguing, as the geographies align within the extent of Hurrian ethnic areas but do not reveal the god's original characteristics. However, the conflation between Classical-era Mithras and Ḫaldi connects Ḫaldi to the Mitanni god “Mithra.” Mitanni, an ethnically Hurrian group with an Indo-European ruling class, associated with horse-riding in the second millennium BCE, originated and migrated from somewhere east of Mesopotamia, possibly from around Lake Urmia. If so, Ḫaldi and Mithra/Mithras may refer to the same god or share common origins at the root of the Hurrian group. The archaeological evidence for Muṣaṣir’s rise and growth in the mid to late second millennium provides an additional data point, as those years parallel the migration of Hurrians into Mesopotamia. Despite that, Ḫaldi’s Hurrian origin remains obscure and ambiguous. The name of the kingdom and its people further reinforce that equivocation. The name Muṣaṣir, while Assyrian, is likely based on the descriptor of the state near the borderlands, while the Urartian title, Ardini, merely belies its religious importance. Urzana, the only known king of Muṣaṣir, lacks an Assyrian name. However, his brother’s name, Shulmubel, reflects Akkadian linguistic etymology and a certain Abaluqunu, a governor of Muṣaṣir and Tunbaun, shares the same characteristics (Collon

[121] Collon (1994) alternatively translates the line as “an Urartian city,” but Radner notes the proposed spelling of Urartu is unattested elsewhere.

1994, 38). While Ḫaldi may have Hurrian linkages, the unclear associations possibly served as precisely the reasons for the Urartian kings' choice of the god.

The ethnic ambiguity of Ḫaldi's origins may explain his erection on top of the Urartian imperial pantheon. As neither clearly a god for the Hurrian populations nor a local god of a kingdom of such importance to challenge the central state's authority, Ḫaldi served as a figuratively empty vessel to imbue with deliberate meaning and symbols. The Urartian kings propagated their imperial system over conquered regions, relying significantly on a uniform religious ideology (Zimansky 2012b, 102). Early Urartu, or its direct political forebearer of Na'iri, was a loosely confederated collection of polities, while the fortresses and inscriptions of the Sarduri dynasts indicate direct control over the entire realm (Bernbeck 2003, 274–79). The emergence of the imperial authority coincided with the birth of a codified Urartian pantheon. The list of gods at Meher Kapisi includes the powerful Hurrian deities as well as a list of small regional gods, a sign of Išpuini's intention of integrating the empire's broader religion into one central system (Zimansky 2012b, 105–7). Ḫaldi's pre-existence, possible importance, and geographic proximity to a large swatch of recently annexed lands made him ideal as the primary deity of this newly established religious ideology. References to Ḫaldi before this time denote his minor importance, allowing Išpuini to fully claim authority from the god while preserving the perceived independence of Ḫaldi and his associated religious economy. The lesser status of Ḫaldi, without preexisting relationships, enabled the Urartian kings to imbue meaning on their newly adopted protector.

The kings of Lake Van required a major god to support their expansionary ambitions and provide supernatural legitimization for their actions, as the Assyrians had with their supreme deity Aššur (Zimansky 2012:105). Ḫaldi's introduction in Urartu served that purpose and validated the aspirations of the Urartian kings (Salvini 1989:80-81). The Urartians could not simply claim ownership of a major god comparable to Aššur, like Teššub, and thus seemingly conjured a supreme god of their own. The contrast between Ḫaldi's previously minor importance and explicitly royal symbology supports their deliberate assignment of characteristics. Discussed in the context of the temple on the Khorsabad relief, common motifs of Ḫaldi include spears, shields, lions, and warfare (Loon 1991, 20; Belli 1999, 37–41; Zimansky 2012a; 2012b, 105–7). Ursula Seidl (2004, 199-200) notes that these symbols and the representation of Ḫaldi on the Anzaf shield directly parallel the imagery of Ninurta and Nergal, Assyrian deities associated with kingship. Nergal specifically confers the Neo-Assyrian kings the weapons for their conquests, much like Ḫaldi's spear does for the Urartian kings (Cassin 1968, 72). Ḫaldi's suspicious association with the royal gods of Assyria, despite his previously obscure status, argues for Urartian assignment of kinglike characteristics. Further, beginning with Išpuini, Ḫaldi's name appears first in indexes of gods, even as the minor deities vary depending on the location of a given text (Zimansky 2012:106). The continuation of local worship while simultaneously imposing adoration of an imperial god is a common trait of imperial expansion.

Studies of empire and imperial expansion note how ideology can serve to justify imperial expansion and how conquering forces often appropriate deities of conquered

populations in the pursuit of control (Carneiro 1992, 193–94; Schreiber 2008, 131). A commonly observed behavior is the creation of new religions around the king or emperor then imposing that system on subdued populations (Sinopoli 1994, 168). Even though leaders seize the legitimacy of existing ideologies, the appropriated symbols grow in importance and merge with the political reality of the appropriator (Sinopoli 1994:167). Areshian (2013, 6) lists five methods of imperial integration, including oppressive domination of populations and incorporating local elites into institutions, a combination of two that best describes the Urartian empire. Through the context of trends in imperial expansion and ideology, the appropriation and propagation of Ḫaldi is unremarkable. However, while Muṣaṣir's material culture reflects Urartian traits, the kingdom was never fully conquered and integrated into Urartu. Even Rusa S's reconquest and occupation of the kingdom's cult center lasted only 15 days and ended with Urzana's reinstatement on Muṣaṣir's throne.[122] This exact situation is rare for the major empires of the world, who seemingly choose to elevate conquered gods within their direct sphere of control. Even the elevation of Marduk to the top of the religious pantheon of the Babylonians began when Babylon was the political capital of the Old Babylonian state. Although Marduk's worship and position at the top of the pantheon occurred during the reign of the foreign Kassites, his cult center at Babylon fell within the core of Kassite territory (Tenney 2016).

By keeping the cult center outside of the empire's borders, the kings may have gained an air of legitimacy from an apparent degree of independence, as opposed to a god

[122] eCUT A 10-05, r17-19

residing next to the king's residence. A second Urartian-style *susi* temple alongside the existing Muṣaṣir Ḫaldi temple may have been an effort to connect the Muṣaṣirian Ḫaldi cult to the Urartian imperial religious ideology without direct control of the kingdom. The visibility to people on the Iranian plateau and Mesopotamia further cemented the god's supposed independence. Muṣaṣir's borderland status corresponds to the god's marginal identity, ready for adoption (Radner 2012, 247–48). Compare the situation of the existing supreme Hurrian god. The primary temple of Teišeba, the second-most important god in the Urartian pantheon and first among the Hurrians, was also outside the borders of Urartu, in the southern borderlands of Anatolia's Taurus Mountains (Radner 2012, 254–56). However, Teišeba's existing identity and independence likely complicated cooption by Urartian rulers and endowed too much Hurrian character on the religious ideology.

The final question of Muṣaṣir and Ḫaldi's origin concerns the god's genesis, when the deity first emerged and became associated with this area. A dearth of early religious architecture and scant remains from Sidekan's Late Bronze Age limit any insights about the nature of Ḫaldi's worship before the 9th century BCE. Thus hypotheses must rely on historical or environmental data. Petrosyan's historical linkage of Ḫaldi and Meher leads him to argue that the Urartian god shared several common characteristics, including emergence from the ground and caves (Petrosyan 2004, 6). Caves also relate to the Nestorian epic of *Mar Qardagh*, where Qardagh travels to Beth Bgash, in the "upper reaches of the Great Zab River and Lake Urmi[a]" (Walker 2006, 166). One hypothesis, therefore, was that the existence of caves in the area sparked the proverbial birth of Ḫaldi. However, the area around Sidekan and Mudjesir has no documented caves, despite the

preponderance of the geological structures to the west and north. The geological characteristics of Sidekan, with folded igneous rocks creating dendritic drainage networks, are subpar conditions for natural stone cavities, as opposed to the karstified limestone of the Baradost Mountain west of Soran (Solecki 1998, 26; Sissakian 2013).

Sissakian's geologic map of northeast Iraq indicates that Sidekan is the *least* likely location for cave formation. In addition, the association with caves relies primarily on the connection between Ḫaldi and Meher. While the "Gate of Ḫaldi" at Meher Kapisi may relate to caves, more common motifs include fire, fertility, winemaking, lions, bulls, a spearhead, or a raven (Petrosyan 2004, 4–5; Zimansky 2012b, 103–5; 2012a). Associating these motifs with Sidekan is an exercise in pure speculation or extrapolation from minuscule modern details, such as using the existence of a few small vineyards in Sidekan as proof as a connection. Future research in Sidekan or the exposure of additional texts related to Ḫaldi may establish further characteristics about Ḫaldi or his predecessor. Until that time, the current dataset established Ḫaldi's longevity and adoption by the Urartians as a symbol of their imperial dominion.

Conclusions

The history of Muṣaṣir demonstrates how the intersection of technological, religious, and cultural factors affects a marginal region's growth in positive and negative trajectories. The technological innovation of horse transport initially spurred the growth of Muṣaṣir's sedentary occupation. Either alongside that phenomenon or because of it, the cult center of Ḫaldi in Muṣaṣir led to the kingdom's increasing importance and

visibility, even as it maintained independence. With the selection and appropriation of Ḫaldi as the preeminent god of Urartu, Muṣaṣir effectively became a client state of the kings of Van but without the direct support or control of regions under the imperial hegemony. The Urartian cooption of the god ensured that with the empire's fall, the assistance and support the kingdom enjoyed would end. Without the artificial assistance of their Urartian benefactors, the settlements in Sidekan could not support the density of occupation in the Iron III. Thus, while the original catalyzing force of improved transportation in the area enabled growth, the cultural focus led to a decreased overall occupation in the long term.

The rise and growth of the political entity eventually known as Muṣaṣir likely began in the Late Bronze Age, sometime before the first Middle Assyrian king boasts of its conquest in the 14th century BCE. While circumstantial, the beginnings of horse riding not long before the date of the earliest published archaeological material in the Sidekan subdistrict suggests the improved transportation enabled by their husbandry impacted its rise. The reference to "the holy city founded on bedrock," as early as the 13th century established Muṣaṣir had an independent cult center nearly concurrent with its known founding. Patronymics with the theophoric element of Ḫaldi in the 13th century, simultaneous to Shalmaneser I's description of the city as holy, indicate the worship of the god extended far beyond the entity's immediate environs, although Ḫaldi remained a marginal figure. Excavations of Gund-i Topzawa established evidence of archaeological excavation in the kingdom's hinterland as early as the 13th century BCE, the apparent rise

of Ḫaldi. Centuries later, the excavation at Mudjesir suggests a significant temple existed in Muṣaṣir before the Urartian monarchs' inaugural pilgrimage to the cult center.

When the Urartian kings appropriated Ḫaldi as the preeminent god for their pantheon, they coopted the symbology and meaning for their imperial system. While Ḫaldi's preexisting symbols are unknown, the Urartian Ḫaldi's explicit connection to kingship argues for the god's transformation at this time. As there is no evidence Ḫaldi served as a preeminent god before the Urartian king's cooption, Išpuini and the Urartian elites likely imbued Ḫaldi with characteristics befitting his role as their royal protector. Muṣaṣir's existing political and cultural system was not Urartian, but the kings chose the kingdom precisely because it was outside their empire. The archaeological assemblage of Sidekan from Gund-i Topzawa and Mudjesir parallels this political reality, with culturally Urartian goods but lacking the elite wares that signify application of imperial control. Maintaining Muṣaṣir's nominal independence from Urartu would eventually spell disaster for its residents.

For more than a century, the Urartian focus and support on Muṣaṣir brought the kingdom wealth and growth. In the Kelishin Stele alone, the kings brought 1112 ox and 9120 sheep[123] as a sacrifice, a vast quantity of livestock for this small kingdom. Sargon II's list of the goods purloined from the Ḫaldi temple and Urzana palace displays the scale of riches enabled by the Urartian king's patronage. The proposed agricultural intensification of the Topzawa Valley system during the Iron III, Muṣaṣir's peak, was likely a result of the growth of Muṣaṣir. Notably, domestic settlements like Gund-i

[123] CTU A 03-11 r 10

Topzawa were unlikely to have been materially supported by the Urartian treasury, but the potential population growth around the palace and cult complexes spurred a required intensification of agricultural land further in the hinterlands from the urban core.

Once the Urartian dynasty coopted Ḫaldi, the Urartian kings ensured the intertwining of fates with Ḫaldi, Muṣaṣir, and their empire (Zimansky 2012:714). After Sargon II's sack of the temple, Urartian reconquest, and subsequent contraction of Urartu into a regional state, Muṣaṣir exited the historical record. Personal names with Ḫaldi's theophoric element continue into the 7th century BCE, suggesting that Ḫaldi worship continued despite the cessation of political importance. However, the archaeological evidence from Sidekan suggests a contraction of occupation during the Achaemenid Period. With only elite burials and a probable Achaemenid column base at Mudjesir, Ḫaldi worship continued in some reduced form. Achaemenid followers of Ḫaldi may have gone on pilgrimage to the temple at Muṣaṣir, taking the Kelishin pass from the Iranian plateau. Was the wealthy woman buried at Gund-i Topzawa 1C-W an unlucky pilgrim on that route or a native Muṣaṣirian of high status? The god's final reference is in the Behsitun inscription, outlining a revolt by an Armenian, the son of a man named "Ḫaldita." While Ḫaldi disappeared, its religious system did not. Once Urartu fell, locals and rising empires adopted its religious ideology, transforming it into their own. Unfortunately for Muṣaṣir and Ḫaldi, the assimilation of the gods' characteristics made his worship unnecessary.

Without the support of external patrons, the occupation of Sidekan contracted. After the Achaemenid Period, Sidekan reverted to nomadic or transhumant occupation,

evidenced by a near absence of archaeological material and textual descriptions of the area as solely occupied by tribes. Ceramic evidence indicates an uptick in occupation beginning in the Islamic period, simultaneous to the rise of the Sorani Emirate in neighboring Soran. However, reports from the Sorani Emirate indicate that the population of Sidekan remained tribal, and archaeological evidence does not show evidence of Soran's growing types of occupations. As an arduous area to live, caught on the borderlands between the struggles of great powers, Sidekan's population occupied the land as intensively as needed for their lives.

The tale of the rise and fall of Muṣaṣir in Sidekan demonstrates how religious sponsorship can be a positive catalyst for the abundance and growth of cities and settlements but prove deleterious in the long run without the necessary conditions for independent growth. Settlement in Sidekan began only when technological advancements in transportation lowered the barriers to occupation because, without those advantages, the region did not warrant the intense growth seen throughout the Ancient Near East. The area's first main occupation occurring many centuries after its neighbor in Soran indicates the higher floor of optimal conditions for growth. Unfortunately, the religious cult's economic pull that led to occupation growth and support from their Urartian patron resulted in an intensity ill-suited to the landscape. As a marginal landscape, the pull causes the collapse, a phenomenon not unlike the curse of resources that portends the future of many modern countries (Sachs and Warner 2001; Acemoglu et al. 2002).

Muṣaṣir emerged from the historical depths already synonymous with a wild, mountainous borderland, marginal in geographic proximity and accessibility. While the

Urartian name for the kingdom, Ardini, merely reinforced the realm's religious importance, the Assyrians' christening assigned a literal moniker. The earliest Assyrian toponym, *Muṣru,* explicitly noted the land's borderland status, deriving the name from the Assyrian word for borderland, *miṣru*.[124] The evolution to the name Muṣaṣir alluded to the kingdom's characteristics. Urzana's seal, from the 8th century BCE, read in part, "like a snake in difficult mountains, the mouth is open."[125] The text's pun, *mūṣu*, literally "exit" and *ṣīru*, "snake" alluded to the landscape of winding valleys between the perilous mountains of Sidekan where the kingdom lay. Forever a serpentine intermontane region on the margins of empire and civilization, Sidekan's near millennia of prominence concluded as Ḫaldi abandoned its residents.

[124] CAD M/II, 113-115 *miṣru*
[125] *šá kīma ṣeri ina šadê lemnūti pīšu petû.*

Appendix

Appendix A: Sidekan Iron Age Pottery Typology

A.1: Description

The pottery typology of the excavations in the Sidekan area relies almost exclusively on the Gund-i Topzawa excavation, with the majority of the analysis focused on the material from Building 1-W Phase B. While the Gund-i Topzawa material originates from a relatively short time, it is the most complete pottery collection for this period in Sidekan or surrounding areas in the Iraqi piedmont. Further, the typology is instructive in dating the collected survey material, discussed in the following chapter. Much of the recording methodology was discussed previously in Chapter 4's Recording & Data Management section, but the recording structure informs the typology's creation. The excavation used an Operation – Locus – Lot system, and the collected material was divided into bags. Bags' material was limited to a single Lot and each new day necessitated the opening of a new bag.

A pre-printed bag tag accompanied bags of varying types of materials. These bag tags were surplus from a previous excavation in Syria at Tell es-Sweyhat and thus contained information not applicable to this project, notably the title "SW No. 11," which is disregarded in all data recording. The bag tag number was pre-printed and came in packs of 100, but unfortunately nonsequential. Thus, the bag tag's actual numerical value has little relationship to any aspect of the excavation, apart from subsequent numbers'

likely origin on corresponding days. Forms on the labels were left empty for excavators to list information like Locus, Lot, Site, and Operation/Square. Below this information was a perforated section with a copy of the bag number, designed to be torn off and placed in the bag's interior in instances where the tag becomes separated from the bag. Also, the bag tags included a field for the supervisor's initials. Each tag lists the possible materials for collection: pottery, chipped stone, ground stone, bone, shell, metal, object, carbon, soil, floatation, pollen, or other. Finally, the bulk of the space on the bag tag was a list, with related check marks and date fields, of the material's processing steps. These listed steps included: collected, sorted, conserved, to draw, drawn, to photo, photo, and discard.

Each collected material, including pottery, bone, radiocarbon samples, or any appropriate types, warranted an individual bag, specific to the day and the Lot. In instances where a single physical bag could not hold all of the finds, bag tags were created to note "Bag 123 Part 1" vs "Bag 123 Part 2," for example, and the recording combined the physical collection units. Field data collection of ceramics included only the bags' related stratigraphic information. Once the ceramics were collected in bags, we transferred them to the field laboratory, located in the dig house, and cleaned them the same day, if possible.

The process for recording and analyzing the Gund-i Topzawa pottery was not identical in the two excavation seasons, but the methods were broadly similar. Due in part to labor, certain details were recorded in 2014 but not during the 2015 season. Most notably, 2015 ceramics lack the associated information about their ware types and

weight. As such, ware cannot be used in this analysis to categorize and create typologies, but the appendix includes information about the sherds with recorded ware type and a list of the 60 ware types. While both the 2014 and 2015 seasons recorded the color of the ceramics, that alone does not provide sufficient information for categorization and creation of typologies.

The processing of pottery largely followed the steps laid out on the bag tag. Once the bags reached the lab, processing included counting the total number of sherds in each bag, weighing all of the bag's ceramics, and discarding the non-diagnostic material. We determined ceramics to be diagnostic if they had at least one of the following characteristics: a rim, a base, a handle, a spout, painted decoration, incised decoration, or some other notable decoration. Diagnostic sherds were counted and placed either back in their existing bag or a new bag if the original package was insufficient. Subsequently, each diagnostic sherd was drawn with the estimated diameter included alongside the drawing. At that point, the diagnostic sherds from the bag were photographed. Post-processing, at the end of the season, the bags were stored in the Soran Department of Antiquities office for safe-keeping. Once returned from the field, pottery data was added to the Airtable database with relevant photographs and drawing scans. The drawings were traced using Adobe Illustrator, and the relevant tracings are included in this publication.

Once in the database, the process of sorting the pottery into typologies began. Each diagnostic sherd received a number corresponding to their bag (e.g. 1200.1). Given the non-uniform recording of ware types, the wares could not be included as dimensions for the typology analysis. While the sorting and creation of typologies relied on the

characteristics of the sherds, Stefan Kroll's analysis of the pottery of Urartu in *Keramik urartäischer Festungen in Iran* served as an invaluable resource of the many variations of pottery across Urartu during the period in question (1976). I attempted to connect each Sidekan type with a related Kroll type, although the two typologies do not correspond exactly.

Sorting began by adding relevant information about three dimensions, in decreasing order of sorting: vessel type, body type, and rim type. Vessel types include holemouth jar, jar, pithoi, bowl, plate, cup, and bowl lid. The primary distinction between holemouth jars and jars is their open and closed forms. Holemouth jars are open forms, while jars are closed forms. Bowls and plates can often have similar forms, but I categorize vessels as plates when either their sides are completely level, or the low slope has no accompanying curve to hold in liquids. In instances where the diagnostic lacked sufficient information, the sherds were grouped into handle or sherd. Those two types remained the only sorting characteristic unless a notable handle feature differentiated it from other handles. Body type included ellipsoid, ovoid, rounded, carinated tall, carinated shallow, hemispherical, and straight-sided. Rim types had far more options, using combinations of rolled, thickened, everted, flattened, squared, ribbed, pinched, among many others. Once categorized, vessels with similar types were sorted into groups, beginning with the vessel type. Each vessel type was then sorted by body type, with the final differentiation the rim type. The multi-variate nature of the rim type recording necessitated some amount of intuition and grouping at that level of detail. Additionally, in instances where a single vessel and body type included sherds of drastically different

diameters, the vessel diameter was used as an additional sorting characteristic. There is often an “a” or “b” variation to indicate overall closeness is style but slight differences with particularly similar types.

Sorting in this way resulted in a typology with 69 distinct types. The large number of varieties is indicative of my tendency to split rather than lump together. This pattern was partially deliberate and partially a side effect of the assemblage. The way the pottery was sorted – by vessel type, body, rim, size – as opposed to ware, vessel type, size, and rim, results in additional splitting near the end of the process. Many pottery sorting strategies rely primarily on ware type, which can lead to broader sorting of shapes that may more accurately reflect the potters' intended shapes. Additionally, because nearly all the pottery originated from one period at the site, the primary goal was not to determine seriation and change over time but to differentiate for chronological comparison across sites. With a typology more concerned with seriation, the somewhat distinct sherds could be lumped together in a single phase. Three, I believe there is value in creating the maximally navigable number of categories.

Pottery typologies are fundamentally a question of data creation – we transform the atomic piece of data, sherds, with additional dimensions and metrics acquired using a much broader set of information into usable data pieces. Each sherd has a nearly infinite set of characteristics that would make the comparison of hundreds of sherds across sites and periods nearly impossible. With the Gund-i Topzawa ceramics, putting aside stratigraphic information, each sherd has five to six physical characteristics and a related photograph and line drawing. Processing and comparing that many data points across

hundreds and thousands of sites are beyond human comprehension. By creating pottery typologies, we more effectively create categorization that scholars can use to hone into the relevant subset of ceramics. As typologies are usually published with only a handful of type examples, each type's exemplar serves to represent all the corresponding material. Thus usable, but narrow typologies can help future scholars locate the relevant information and provide an extra level of detail.

Each type name begins with the vessel type, the primary characteristic, followed by a number and an optional letter, with holemouth jars abbreviated as "HM." For example, Jar 1b and HM 2. The breakdown of the 69 types is 19 bowls, 14 jars, 25 holemouth jars, 5 cups, pithoi, handles, plate, sieve, lid, and decorated body sherds. 306 diagnostic sherds went into constructing this typology, although not all sherds had sufficient preservation to place into a type. The following sections discuss each of the major types and their general trends and describe the less represented unique types' characteristics. Appendix A.2 contains a full list of each type, with associated information of individual sherds and line drawings of each sherd in a type. Periodization relies significantly on Kroll's Urartian typology and connects the Sidekan material to published ceramics across the Near East. Concluding is a discussion of the implication of these sherds for dating and the function of Gund-i Topzawa.

Bowls

Bowls make up a large percentage of the diagnostic sherds from Gund-i Topzawa and contain some of the most distinct sherds for connecting the material to similar sites. The general progression of bowl types, from 1a to 13, begins with tall carinated vessels,

with increasingly rounded and hemispherical sides. Bowls 1a and 1b have strong carination, out-turned or everted rims, and sizeable diameters – mostly in the upper teens and twenties. Bowls 2a and 2b are also carinated, but their carination is more hemispherical, resulting in almost a vat-like shape. Both variations' rims are rolled, with 2b's rim flattened. Bowl 3's carination is similar to Bowls 1a and 1b, but the rims have a distinct triangular point. These bowls are quite large, bordering on the shape of a holemouth jar, with diameters ranging from 20 to 42 cm, and are thus unlikely to have been used as consumption vessels. Bowl 4's carinated shape is distinctive with its squared rim, although Gund-i Topzawa only contained two sherds of this type.

Bowl 5 is a distinct type, with highly elongated flaring pinched rims and a hemispherical carination, equivalent to Kroll's Type 11 "Funnel-edged bowl." This bowl shape was common beginning in the Iron II period through the end of Iron IV (Kroll 1976, 115). Although the style continued into the Achaemenid period, examples were found at many typical Urartian sites, including locations around Lake Urmia like Agrab Tepe (Muscarella 1973, figs. 14, 11), Hasanlu IIIA (Young, 1965, fig. 5), and Qalatgah (Muscarella 1971, 47). While this style's prolonged use cannot establish a date, its emergence and popularity post-9th century reinforces Gund-i Topzawa's Iron III date. Bowls 6a and 6b continue the carination but are extremely shallow compared to the tall sides of Bowls 1, 2, 4, and 5. Bowl 6a's rim is highly rolled and rounded, while 6b's rolled and flattened rim resembles 2b's rim. Bowl 7 continues the carination, but the vessels' bodies are rounded, shallow, and much less curved than the preceding types.

Bowl 8a's shape transitions into a much more rounded and hemispherical form, with only the faintest trait of carination in the upper third of its tall sides. Its rims are rolled outwards, with some degree of flattening or molding on its rim. Bowl 8b is similar in shape, but its rim is more rounded than the relatively flat rims of 8a. The single example comes from the excavation of Building 1-W Phase A. It has comparanda to excavated material at Aššur, likely dating to the second millennium BCE's final two centuries (Beuger 2013, Taf. 11: 10-11). Bowl 9's body shape is almost vertical, with only slight curving and carination. Its rims are everted, nearly vertically. The carination is the point in which the nearly vertical rim joins the body. It compares both to Kroll's 15b and 15a, although type 15b's shape was augmented by a handle (Kroll 1976, 116–17). Bowls 10a and 10b, however, move away from carination into proper hemispherical shapes. These bowls are wide and rounded, with 10a having larger diameters and a distinct rolled and flattened rim. Bowl 10b, however, has only a simple pinched incurving rim and is smaller, at 21 cm in diameter. 10b's single example comes from Building 1-E, an earlier part of the excavation. The type matches well with Kroll's type 45 "Clay Vessel," that he dates from the 8th-7th century (Kroll 1976, 127). While this does raise some issues with the dating of 1-E, the single sherd does not provide enough evidence to refute the radiocarbon dating. Bowl 11a and 11b have rounded, incurving bodies. 11a's rims are simple and pinched, much like 10b's rim, while 11b's rims are rolled and have clear pinching below the final incurving of the rim, making a quasi-hammer shape. Bowl 12 has a distinct linear everted rim, with a straight-sided body. The only sherd of this type lacked the preservation further down the vessel to categorize its body shape, but the rim design was unique in the assemblage. Finally, Bowl 13 is another distinct type for dating

across the Near East, comparable to Kroll's type 22 (Kroll 1976, 119). It has a straight-sided exterior, with a flattened and quite thick rim. While Kroll notes it primarily occurs in Achaemenid to Parthian contexts, examples were found at Hasanlu IIIa as well as by Boehmer in his survey of Mudjesir (Boehmer and Fenner 1973, #4). Despite its ubiquity in later phases, its earlier use begins only in the Iron III period, further corroborating that date.

Jars

Jar typological categorization relies significantly on the upper third of the preserved vessels, as most of the diagnostic sherds were unpreserved below the neck and the neck serves as the distinctive feature of jars. The somewhat rigid progression of bowls based on the body shape is not replicated with jars. While the bowl typology borrowed and connected to Kroll's extensive categorization of Urartian era material, his more limited grouping of jars makes the comparison less effective. Jar 1a are small jars with preserved bases about 6 cm in diameter and rims 6-12 cm in diameter. Their necks are narrow, and the bodies are either hemispherical or slightly globular. Rims are primarily simple and out-turned or have slight rounding. Jar 1b, with only one example, is similar in shape to Jar 1a but a larger pitcher. Compared to Jar 1c, with many of the same characteristics of Jar 1a, they are considerably larger, with diameters ranging from 10 – 20 cm, and have much wider necks. Rims have some variation, but like Jar 1a, they tend to be fairly simple with some rolled rims. All variations of Jar 1 compare to Kroll Type 51, "Small bottle – Small pot" ubiquitous at Urartian sites in the 8^{th} – 7^{th} centuries (Kroll 1976, 131).

Jar 2a is unique in the Gund-i Topzawa assemblage, but the type example was completely preserved in the rubble of the upper phases of Building 1-W Phase B's collapse. It had a narrow neck with two small lugs with holes along the side, likely indicative of hoops for rope or similar material, and a diameter of only 3 cm. Its specific ware type was not recorded but was fairly coarse, not a fine and delicate material. The body bulges outwards at its rounded center and has a small base of around 3 cm. Kroll's typology does not have a comparable type, but excavations at Bastam recovered a near-identical match. Jar 2b shape is similar but lacks the dual lugs around the neck. Additionally, both examples of Jar 2b were excavated in the burial of Building 1-W Phase C, in the same context of goods with much later dates than Jar 2a. The absence of rims on both vessels prevents a detailed analysis.

Jar 3a is defined by squarish shaped highly modeled rims and long, wide necks. The preserved examples' diameters are 20 cm, and their necks are only a few centimeters narrower than the rim. None of the bodies were preserved far enough down the sides to establish the overall body shape. Jar 3b resembles 3a, but the neck is much shorter, and the rims are less modeled – a combination of a simple curved and triangular rim. Jar 4 has only one type example with a large diameter and unique rim. The rim out-turns, comes to a curved point, with an angular carinated point on its interior. The neck was preserved only a few centimeters but was quite short. The sherd came from the open space between Building 1-W Phase B and 2-W, which likely was collapsed material from further up the hillside. It compares best to Kroll's type 49, dating from the 8th-7th BCE (Kroll 1976, 130). Jar 5 is somewhat of a catch all for medium to large sized cooking pots with non-

distinctive, out-turned rims ranging from 14 to 30 cm in diameter. Jar 6 has a thick rim, with slight ribbing around the thickened part of the rim. Both examples are 20 cm in diameter with their preserved sections indicating longer and wide necks. Jars 7a and 7b share unique triangular rims, while 7a has a narrowing neck and a wide body. Jar 7b's single example has a minimal neck that does not curve inwards to the same extent. Jar 8's rim resembles an airfoil shape, with the thick rims pinched outwards and a smoothly rounded neck. Jar 9 is large, bordering on the size of a pithos. Its rim is quite thick and rolled outwards, with almost a flattened top and a short neck. The sherd originated from the cleaning above Gund-i Topzawa Building 1-W, in the hillside, later than the primary Phase B occupation. One of the sherds Boehmer collected on his survey of Mudjesir, #14, falls into this type, further connecting the two sites (Boehmer and Fenner 1973, 463). The date of this sherd and the other hillside pottery establishes the material as contemporary to Building 1-W Phase B, likely landing there as part of the collapse of the structure's second story.

Holemouth Jars

Gund-i Topzawa's assemblage contains many diagnostic holemouth sherds and a wide variety of forms, resulting in 25 holemouth jar types. Like the jar typology, the progression has little correlation to the changing body shapes, but some effort was made to differentiate typical cooking pot types versus storage pots. HM 1's rim is the defining feature, as the rim turns outwards with an interior angle of roughly 25-30 degrees with some minimal ribbing on the shoulder of the body. Its recorded wares indicate it was a cooking pot type. The rims range from 21-28 cm in diameter, and while little of the bodies were preserved, the wide gentle slope suggests quite large capacities. HM 2a has a

taller body than HM 1 and less angled rims. Two sherds' similarities and differences serve to illustrate the characteristics of HM 2a. Plate 21.1 from HM 1 has a more angled rim and a lower body slope than Plate 23.2. HM 2a rims are out-turned and thickened, some coming to a rounded point as well. There is some variety in sizes, as the diameters range from 18 to 30 cm. HM 2b is similar, but the body angle is steeper and the rim is even more rolled, with a curved top.

HM 3a-3d are variations on cooking pots. HM 3a has steep and tall sides, with rims rolled, roughly triangular, or a more curved outwards roll. The vessels range from moderate to large-sized – the smallest vessel had a diameter of 17 cm, many had diameters in the 20 cm range, and the largest had a diameter of 48 cm. Additionally, the type includes both examples from Building 1-W Phase B as well as Building 1E. HM 3b has similar features but is smaller, with a maximum size of 15 cm. HM 3c are a series of large cooking pots with small, wide, and flattened handles around the rim. The smallest vessel was 20 cm in diameter and the largest was 46 cm wide. The cross-section of the handles is one of the more distinctive features of this type. While none of the vessels had preserved handles on two sides, the handles' high position and small openings suggest grips on each face. HM 3d includes four bridgeless spouted vessels. The rims are simple, with a slight outward turn, rounding, or featureless rim. The diameters range from 18 to 30 cm. While none of the vessels had a preserved handle, there may likely have been handles to assist in pouring liquids out of these sizable vessels. While there was a theory that HM 3c and 3d's spouts and handles joined to created spouted and handled vessels, the color, ware, and findspots do not support joins.

HM 4, another cooking pot, had no examples with the body preserved more than a few inches down the vessels' sides. However, the preserved shapes indicate a large, reasonably straight-sided vessel with stubby rims. The rims' designs have some variation, from rolled and flattened to a slightly more adorned or ribbed rim example. HM 5a pots are wide, globular vessels with no neck and minimal definition in the rims. There was some effort to thicken or mold the rims, but the overall hemispherical shape is the defining feature. HM 5b maintains the relatively unadorned rims, but the body shape is less globular. The single example comes from Building 2-E. HM 6 lacks any features other than its large size; both type examples of HM 6 have diameters of 50 cm. HM 7 is a moderately sized cooking vessel, with diameters from 20 to 30 cm, with a simple everted rim and a rounded body.

HM 8 is a simple globular vessel with an incurving and unadorned rim. HM 9a, continues as another cooking pot, but has a distinct rim design. The rims have two clear lines of ribbing around their predominantly vertical rims, and the preserved portion of the body is relatively straight. HM 9b has the same double ribbing around the rim but an enlarged and flattened rim top. Additionally, the ware of this type suggests it was a cooking pot. HM 10a and 10b have similar rims, rolled, thickened, and flattened, but differ in their body shape. The preserved portions of 10a sherds indicated a wider slope of the body, while 10b's were more tall and straight. Both 10a and 10b diameters were large, with 10a ranging from 20 to 30 cm and 10b 50 to 60 cm in diameter. HM 10c's rims were more modeled than 10a, with an out-turning rim with a nearly right angle on its interior and a small modeled lip around its exterior.

HM 11 consists of large storage pots with rims and necks that border on the closed forms of jars. The rims are vertical and slightly triangularly decorated, with the body sloping outwards a few centimeters below. Their diameters range from 20 to 40 cm, but the body's diameters increase significantly. HM 12 is a storage pot with a small channeled rim with an unknown body shape, as the preservation of the excavated sherds did not reach much below the rim's edge. HM 13 sole type example is from Building 1-E. Unlike most of the holemouth jars, HM 13 is fine, with a burnished buff color. It has a tall body and a thin, pinched out-turned rim. HM 13 compares to Danti's Holemouth Jar Type 1 from Hasanlu (Danti 2013, 172). While the Hasanlu sherds are made with gray ware, the shapes are the same. Further, the dating aligns with the radiocarbon results from Building 1-E; Type 1 was in the Hasanlu assemblage from Hasanlu phase VIa to IVc, spanning the Middle Bronze III to end of Iron II (Danti 2013, 195). HM 14 consists of fine holemouth jars with simple thickened rims. HM 15 is another storage pot with tall sides. Its rim is rolled and flattened. The single type example of HM 16 is from Building 1-E, and not enough of the rim was preserved to provide an estimated diameter. The body shape resembles the globular curve of HM 8, but its size and ware differentiate it. HM 17 has one largely reconstructed vessel. It was a pot, possibly a pitcher, with a handle stretching from the rim to the base of the globular body. Only one handle was preserved, so it cannot be determined if this was a pitcher with a spout or a dual-handled vessel. The handle was narrowed in the middle, mirroring an hourglass's shape, and the body was decorated with large, raised grooves under the handle. It was found in the courtyard area of Building 1E.

Other Vessel Types

Among the other vessel types are cups, pithoi, handles, plates, a sieve, a lid, and decorated body sherds. Apart from the cups, each of these types does not have the quantity or differentiation to warrant distinct types. The small number of cups is an interesting commentary on the quality and types of vessels used by the residents of Gund-i Topzawa. As cups are a more sophisticated type of vessel, compared to bowls or jars, used for a more prescribed set of functions, they often are associated with elite or semi-elite occupations. This corresponds to the location, construction, and overall distribution of vessels, which lack a large number of fine goods. Further, even the small number of cup types are less fine than those at royal sites of Urartu.

Cup 1 has only one excavated example, but it was a nearly fully preserved vessel from Building 1-W Phase B's Room 2 upper collapse, with only its broken handle attachment missing. It was small, with a 9 cm rim and 4 cm base, an everted rim, widened center, and grooved decoration around the neck. It has clear comparanda for multiple sites in the Near East. Its shape closely matches Kroll's type 80, described as a small bottle, primarily from the 7th century, located at the major Urartian sites of Bastam, Toprakkale, and Argištihinili (Kroll 1976, 143). Type 80's shape, however, did not include a handle and the example's grooving appears to be impressed, rather than the raised groove of Gund-i Topzawa's Cup 1. The cup also compares to cups at Hasanlu. One example of Danti's Cup Type 7 (Figure 4.50:I), with a raised band around the neck indicative of Hasanlu Period IVc, the Iron I period (circa 1250-1050 BCE), resembles the Gund-i Topzawa cup (Danti 2013, 263). Additionally, Hasanlu's Cup Type 8b also compares well the Gund-i Topzawa example, with outward flaring rims and grooved or

raised bands around the neck, and dates slightly later than Type 7 Period IVc-IVb (Danti 2013, 237). Neither Hasanlu types have handles, however. None of the cup types with handles, from both Hasanlu and Kroll's typology, have the same shape as Gund-i Topzawa Cup Type 1. One of the whole vessels recovered during the 2013 section cleaning resembled the shape of Cup 1 but lacked both the grooves and handle break. Unfortunately, the exact provenance of that vessel was not recorded.

Cup 2a and 2b have similar shapes but slight differences in the body shape as well as their findspots. Both shapes differ slightly from Cup 1's shape. Cup 2a's single example, from Building 1-W Phase B's Room 1, had a vertical rim with a slight outcurve and a wide body angle below the neck. Cup 2b's two examples 2 are from the eastern side of Gund-i Topzawa – one from Building 1-E and one from Building 2-E. They differ from Cup 2a with the slight differentiation in the rim and a narrow body shape. Neither example was preserved much below the neck, so the assumed shape relies largely on the rims' size and the types of cup shapes from the period. Both Cups 2a and 2b best compare to Danti's Hasanlu Cup Type 8c, which occurs in Period IVc into Period IVb (Danti 2013, 237). Cup 3 is a beaker with mainly straight sides and a rounded rim, approximately 10 cm in diameter. The two examples vary slightly in their rim design, but both originate from Building 1-W Phase B. The final cup type is Cup 4, with one type example from Building 1-W Phase B's Room 2. It had a single preserved handle, stretching from the rim to nearly the tall vessel's midsection, and grooved banding under the handle. Its size and shape fall between a cup and a pitcher – the overall shape resembled a pitcher while the size compared to a cup.

While the excavations of Gund-i Topzawa recovered five examples of different types of pithoi, each excavated pithos had a distinct design, not warranting its own typology. Further, all of the pithoi were excavated from Building 1-W Phase B. While they are not split into typologies, some of the designs do provide connections to other sites. One Gund-i Topzawa pithos, Plate 44.2, had a rim design – flattened and thick – along with a large grooved band around the neck that resembles Kroll's type 71a. Kroll identified this type of pithos at 33 sites dating from the 7th to 9th century BCE, reinforcing the assemblage's chronological connections from Building 1-W Phase B in particular (Kroll 1976, 140).

Also in the Gund-i Topzawa assemblage were five plates and a lid. The plates lacked any distinctive features and were only differentiated by the slope of their sides. The plates' diameters ranged from 26 cm to 50 cm, with the angles of the sides ranging from nearly level to a slope between a bowl and a flat plate. All of the plates' rims were simple and rounded, with no additional decoration. The undifferentiated and straightforward plates do not allow for any dating or connection to comparanda. The single lid, from Building 1-W Phase B, Room 1, lacked any unique decoration. Much like the plates, the lid's rim was simple and rounded, but the lid was perfectly horizontal. The vessel's center was not preserved, so we are unable to ascertain if there was any handle or additional protuberance to assist in holding or placing the lid on another vessel.

Among the other types of ceramic objects was a single example of a sieve. While the sieve's base was preserved, the rim was not. The base of the sieve was rounded, with a grooved bump forming the ledge for the funnel to rest upon and a single hole at the base

of the vessel. The hole measured approximately 1 cm in diameter. The reasons for terming this vessel a sieve, rather than a large bowl with a drilled hole, are both the groove for support and the wide top that would allow for adding a large quantity of liquid filtered through a small opening. The vessel originated from the south of Building 1-W Phase B's Room 2, in the southern extent of the room's collapse. In terms of comparanda, Kroll's typology lists one funnel (Type 87) but its shape and function were completely different – a wide top tapering to a narrow funnel with a large hole.

The final category of other vessels is broken fragments from larger vessels with some distinct characteristics, despite the original vessel's unknown nature. One category is handles. Of the more than ten well-preserved handle examples, two specific types are worth flagging. One is lugs, with two different shapes. One of the lugs originated from Building 1-W Phase C and serves as one of the only sherds to help date that lower phase of the excavation. Only the lug and its connection to the vessel's interior curve remain, and the lug's shape was wider than deep, with only 2 or 3 cm of space to hold onto. The preserved interior side of the lug indicates this was at the shoulder of a moderately sized jar. This lug compares to vessels at Baba Jan (Goff 1978, fig. 12.4) and the pierced jugs common at Bard-i (Vanden Berghe 1973, 31–32) Bal at the turn of the first millennium BCE, providing a Late Bronze Age or Iron I date for the sherd. The other lug, was excavated around the pithoi storage in Building 1-W Phase B, Room 2. Unlike the lug from 1-W Phase C, this lug had no lip to easily hold the lug but rather was a curved protuberance only a few cm thick. It likely did not serve as the primary way to hold the vessel. The remainder of the handles and decorated body sherds did not have enough

detail or distinctive features to warrant a discussion or connection to possible comparanda. Their drawings and related information are shared in the Appendix.

Concluding Notes

The pottery typology of Gund-i Topzawa leaves a few major takeaways about both the dating of the site and the function of the main occupation of Building 1-W Phase B. The ceramic assemblage of Building 1-W Phase B consists almost entirely of pottery dating to the Iron III period, established through connections to comparable Urartian-era sites as well as the range of radiocarbon dating. While the uncertainty of connecting comparanda across sites as a dating tool can be inexact or result in complications, the overall chronological range of the datable Gund-i Topzawa pottery corresponds to a destruction date in the first half of the 8th century, as predicted by the radiocarbon dates. The comparanda material date ranges begin earlier and end later, but all but one type overlaps in the 8th century. Bowl 13's use begins in the 8th century and continues for centuries after. Both Jar 1 and 4 began in the 8th century and continued through the 7th century. Bowl 9, however, began in the 10th century and ended in the 8th.

The only Building 1-W Phase B vessel type that does not align with the mid-7th century dating is Cup 1. Cup 1 compares both with Hasanlu Iron I material as well as Kroll's type 80, which he dates as Iron III in the 7th century. Given the lack of Iron I material from Building 1-W Phase B, it is unlikely this vessel corresponds to the Hasanlu material. Kroll's type 80 matches the overall pattern periodization of material in the building. His 7th century dating, however, complicates the proposed 8th century

destruction date of the building. The sites with type 80 material are Bastam B, Toprakkale, and Argištihinili. Both Bastam and Argištihinili date securely to the 7th century. The dating of Toprakkale has lowered to the 8th century with the inscription fragment indicating Rusa, son of Erimena, as the fortress's founder and the realignment of the Urartian king chronology with Rusa E as Sargon II's contemporary in 714 BCE (see Urartu section). The length of Rusa E's reign is not known, but it likely ended immediately after Sargon II's eighth campaign, possibly with suicide or assassination in 713, and could not have begun earlier than 735 BCE, when Sarduri A continued ruling. If taking a strict view of pottery typologies, Gund-i Topzawa's final use would have to post-date 735 BCE. Viewing the typologies as more organic and flexible, a mid-8th century date for the beginning of the style corresponds precisely with the radiocarbon dating, further reinforcing that time as the building's destruction.

With a lack of radiocarbon samples in Building 1-W Phase A and a paucity of diagnostic ceramic material, only one sherd can adequately provide a date. Bowl 8b fits into the bowls' style found in the Ištar temple at Aššur, resulting in a date somewhere in the range of 1200-1000 BCE. The single example and wide range are not sufficient alone to date the structure, but with the knowledge it must pre-date Building 1-W Phase B, the dating generally corresponds to the building's expected date. Further, the date of Building 2-E connects those two structures. Although the two buildings do not share ceramics, the date of Building 2-E suggests they were at least partially contemporary. The two ceramic types, Bowl 9 and Cup 2b, span the 10th through 8th centuries and 13th through 10th centuries, respectively. The overlapping 10th-century date of the pottery perfectly aligns

with the radiocarbon dates of 996 – 814 BCE (95% confidence interval). Building 1-W Phase A may have slightly pre-dated its eastern neighbor, but more likely, they were part of a contemporary settlement.

Building 1-E's date also corresponds well with the proposed date range from the radiocarbon sample. The sample from the excavated material in the building returned a probable range of 1261-1107 BCE. HM 13's comparanda material ranged from the 15th to the 9th centuries, while Cup 2b's comparanda range from the 13th to 10th centuries. Both ranges include the 13th and 12th centuries, the dates suggested by the radiocarbon material. Bowl 10b, with its single example, complicates the dating, as the comparanda selected is Urartian from the 8th and 7th centuries. Given the vessel's relatively ubiquitous feature – a simple rimed globular open form – the Kroll Urartian comparanda was likely erroneously chosen, and a better match exists from the earlier periods. With both the pottery dating and radiocarbon results, Building 1-E was likely abandoned not long after Building 2-E came into use, with Building 1-W Phase A also in use at the time.

With further chronological specificity coming from the ceramic analysis, it is worth briefly reiterating the major dates concerning the rise of Urartu and Muṣaṣir and how they intersect with the archaeological material. The earliest probable references to Muṣaṣir came in the early 13th century from Adad-nirari I, with Middle Assyrian kings boasting of fighting or attacking the kingdom through the end of the 11th century. A series of kings attacked Muṣaṣir from the mid-10th through early 9th century, before a century of silence as Muṣaṣir seemingly came under the more direct control of the Urartian kings. Those dates correspond to the dates of both the Gund-i Topzawa

buildings, as well as the Mudjesir radiocarbon date. Building 1-E existed during the initial Assyrian expeditions to the area, the 12th through 10th century. Building 2-E and 1-W Phase A were standing during another phase of attacks in the 10th and 9th centuries. The uptick and subsequent pause in Assyrian attacks under Shalmaneser III align with the date of construction for the Mudjesir drain (895-833 BCE), which seemingly led to the elevation of Ḫaldi and Muṣaṣir by Išpuini and Minua. During this period of Urartian control, Gund-i Topzawa Building 1-W Phase B flourished, with its likely destruction date in the decades before Sargon II looted the Ḫaldi temple. Although the archaeological dates are not exact and leave room for interpretation, the general alignment with historical events provides an additional data point to reinforce both the chronology of the area and this village's identity as part of the kingdom of Muṣaṣir.

The function of the Building 1-W Phase B, as viewed from the types of ceramic vessels, was primarily domestic, with a non-trivial amount of craft production, ranging from large pithoi to medium-sized holemouth jars. The typology of vessels is not particularly instructive for the types of functional vessels used at Gund-i Topzawa, but the lack of certain vessel types does provide insights into the site's activity. The deficiency of cups – both the actual number of vessels and the types – stands out. With only eight total cups from all phases at Gund-i Topzawa and five of those from Building 1-W Phase B, cups make up a minuscule percentage of the total assemblage. Cups are associated with consumption rather than craft production or storage, as their functions were primarily limited to drinking liquids. Further, the style of the cups was fairly crude,

with simple grooving as decoration. Additionally, the five plates reinforce the lack of fine consumption goods in the building.

Bowls' functions are less constricted as fine consumption vessels, as some of the types forms and sizes could allow for a multitude of uses. The room with sufficient differentiation of the upper and lower floors, Room 3, suggests that bowls were used in the upper floor's habitation contexts, with bowls making up 22% of the vessels in the upper level versus 11% of the vessels in the ground floor. Interestingly, one of the most distinctive bowl forms associated with consumption, Bowl Type 5 (Plate 6.3), was found in the same context as the finest cup type, Cup 1 (Plate 48.1), along with other types like the spouted HM 3d. This provides further evidence for living quarters on the upper floor where the inhabitants consumed the products manufactured below and in the surrounding area.

The forms and ware of most vessel types do not necessarily provide new insights into the types of production and crafting that took place at Gund-i Topzawa but can reinforce the building's dual-use. Of the forms that signify crafting or cooking, HM 3c is distinguished as a clear cooking vessel with a wide opening and handles to assist in the process. The single sieve was surely associated with some type of production, possibly wine, although the form and related contexts can not clarify which activity. The large pithoi, all on the ground floor, indicate storage of goods, although the forms and decorations do not provide any additional insights. As a whole, the ceramic typology of Gund-i Topzawa Building 1-W Phase B presents a domestic context with a smattering of fine or consumption goods.

Comparing the material to both Boehmer's survey pottery from Mudjesir and RAP's excavations and survey material, the form and wares are largely similar. Despite the proposed elite nature of Mudjesir, as the capital of the kingdom, the differences in pottery are minimal. That may be, in part, a reflection of the areas surveyed at Mudjesir and, in part, a sign of Muṣaṣir's lack of full integration into the Urartian empire during the period of hegemony. Gund-i Topzawa's ceramic assemblage's conformity to the Mudjesir material reinforces the date of that site and the extent of Muṣaṣir during the Iron Age. The further conformity to Urartian specific types shows the empire's cultural gravity, even without the import of fine palace goods. The complete Gund-i Topzawa typology will be a useful tool for any archaeological projects working in the borderlands of Urartu as well as dating unknown survey sites in the Sidekan area.

A.2: List of Types and Sherds by Type

List of Sidekan Iron Age Pottery Types

Type	Plate #
Bowl 1a	1
Bowl 1b	2
Bowl 2a	3
Bowl 2b	4
Bowl 3	5
Bowl 4	6
Bowl 5	6
Bowl 6a	7
Bowl 6b	7
Bowl 7	8
Bowl 8a	9
Bowl 8b	9
Bowl 9	10
Bowl 10a	11
Bowl 10b	11
Bowl 11a	12
Bowl 11b	12
Bowl 12	13
Bowl 13	13

Type	Plate #
Jar 1a	14
Jar 1b	15
Jar 1c	16
Jar 2a	17
Jar 2b	17
Jar 3a	18
Jar 3b	18
Jar 4	19
Jar 5	19
Jar 6	20
Jar 7a	20
Jar 7b	20
Jar 8	21
Jar 9	21

Type	Plate #
HM 1	22
HM 2a	23
HM 2b	23
HM 3a	24
HM 3b	25
HM 3c	25
HM 3d	26
HM 4	27
HM 5a	28
HM 6	29
HM 7	30
HM 8	31
HM 9a	32
HM 9b	33
HM 10a	34
HM 10b	35
HM 10c	36
HM 11	37
HM 12	38
HM 13	39
HM 14	40
HM 15	41
HM 17	42
Lid	43
Pithoi	44
Plate	45
Sieve	46
Base	47
Cup 1	48
Cup 2a	49
Cup 2b	49
Cup 3	50
Cup 4	51

Individual Sherd Information

Plate Location	Ceramic Type	Diameter (cm)	Phase	Room Number	Ware	Munsell Color
Plate 1.1	Bowl 1a	26	1-W B	Room 2		2.5YR 6/8
Plate 1.2	Bowl 1a	22	1-W B	Room 2		
Plate 1.3	Bowl 1a	21	1-W B	Room 2		7.5YR 6/3
Plate 1.4	Bowl 1a	16	1-W B	Room 6		5YR 5/3
Plate 1.5	Bowl 1a	15	1-W B	Room 2	5a	7.5YR 5/3
Plate 2.1	Bowl 1b	19	1-W B	Room 2	6b	5YR 4/4
Plate 2.2	Bowl 1b	20	1-W B	Room 3		7.5YR 5/4
Plate 2.3	Bowl 1b	20	1-W B	Room 3		5YR 5/4
Plate 2.4	Bowl 1b		1-E			10YR 5/4
Plate 3.1	Bowl 2a	20	1-W B	Room 2		5YR 7/3
Plate 3.2	Bowl 2a	21	1-W B	Room 2		2.5YR 7/3
Plate 3.3	Bowl 2a	33	1-W B	Room 2	2e	7.5YR 7/4
Plate 4.1	Bowl 2b	32	1-W B	Room 2	3c	7.5YR 6/3
Plate 4.2	Bowl 2b	30	1-W B	Room 2	3c	7.5YR 6/4
Plate 4.3	Bowl 2b	28	1-W B	Room 2		7.5YR 7/4
Plate 4.4	Bowl 2b	25	1-W B	Room 2		7.5YR 6/3
Plate 4.5	Bowl 2b	19	1-W B	Room 2		2.5YR 5/4
Plate 5.1	Bowl 3	40	1-W B	Room 2	9a	5YR 5/4
Plate 5.2	Bowl 3	42	1-W B	Room 1		7.5YR 6/3
Plate 5.3	Bowl 3	31	1-W B	Room 1		7.5YR 5/4
Plate 5.4	Bowl 3	25	1-W B	Room 1		7.5YR 6/3
Plate 5.5	Bowl 3	20	1-W B	Room 3		5YR 6/8
Plate 6.1	Bowl 4	20	1-W B	Room 2	3c	7.5YR 5/4
Plate 6.2	Bowl 4		1-W A			5YR 6/8
Plate 6.3	Bowl 5	12	1-W B	Room 2	3a	10YR 4/2
Plate 7.1	Bowl 6a	20	1-W B	Room 3	1e	10YR 7/8
Plate 7.2	Bowl 6a	15	1-W B	Room 1	5a	2.5YR 5/6
Plate 7.3	Bowl 6a		1-W B	Room 3		7.5YR 6/3
Plate 7.4	Bowl 6a	18	1-W B	Room 3		2.5YR 5/6
Plate 7.5	Bowl 6b	25	1-W B	Room 1		5YR 5/4
Plate 8.1	Bowl 7	25	1-W B	Room 1		5YR 6/6
Plate 8.2	Bowl 7	20	1-W B	Room 1	3a	7.5YR 4/3
Plate 8.3	Bowl 7	15	1-W B	Room 1	5a	5YR 6/6
Plate 8.4	Bowl 7	14	1-W B	Room 3		5YR 5/4
Plate 9.1	Bowl 8a	23	1-W B	Room 2	6b	7.5YR 5/3

Plate 9.2	Bowl 8a	20	1-W B	Room 3	6b	5YR 6/6
Plate 9.3	Bowl 8b	20	1-W A			2.5YR 4/6
Plate 9.4	Bowl 8a	21	1-W B	Room 2		7.5YR 7/6
Plate 9.5	Bowl 8a	17	1-W B	Room 1	3c	7.5YR 4/2
Plate 10.1	Bowl 9	25	1-W B	Room 3		5YR 5/8
Plate 10.2	Bowl 9	20	2-E		5b	2.5YR 3/1
Plate 11.1	Bowl 10a	30	1-W B	Room 2	3c	7.5YR 6/4
Plate 11.2	Bowl 10a	27	1-W B	Room 2		7.5YR 7/4
Plate 11.3	Bowl 10b	21	1-E			5YR 5/3
Plate 12.1	Bowl 11a	19			1e	5YR 5/6
Plate 12.2	Bowl 11a	20	1-W B	Room 2		5YR 4/6
Plate 12.3	Bowl 11b	20	1-W B	Room 1		7.5YR 4/3
Plate 12.4	Bowl 11b	18	1-W B	Room 2	3c	7.5YR 5/4
Plate 13.1	Bowl 12	14	1-W B	Room 3	5a	2.5YR 6/6
Plate 13.2	Bowl 13	19	1-W B	Room 2	6b	5YR 4/4
Plate 14.1	Jar 1a	3	1-W B	Room 6		7.5YR 7/4
Plate 14.2	Jar 1a	8	1-W B	Room 2		5YR 6/6
Plate 14.3	Jar 1a	10	1-W B	Room 3		5YR 4/2
Plate 14.4	Jar 1a	6	1-W B	Room 2	6a	10YR 6/4
Plate 14.5	Jar 1a	5	1-W B	Room 2	3c	5YR 7/8,7.5YR 6/4
Plate 14.7	Jar 1a	7	1-W B	Room 2	1a	7.5YR 4/1
Plate 14.8	Jar 1a	10	1-W B	Room 3		10YR 5/4
Plate 14.8	Jar 1a	10	1-W B	Room 6		7.5YR 4/3
Plate 14.9	Jar 1a	11	1-W B	Room 3		5YR 5/4
Plate 14.10	Jar 1a	4	1-W B	Room 2	1a	5YR 5/6
Plate 15.1	Jar 1b	9				
Plate 16.1	Jar 1c	13			1e	5YR 5/6
Plate 16.2	Jar 1c	11	1-W B	Room 1		2.5YR 6/8
Plate 16.3	Jar 1c	16	1-W B	Room 2	6b	2.5YR 6/6
Plate 16.4	Jar 1c	10	1-W B	Room 2	3a	10YR 5/2
Plate 16.5	Jar 1c	20			1e	5YR 5/6
Plate 16.6	Jar 1c	11	1-W B	Room 2		5YR 7/6
Plate 16.7	Jar 1c	13	1-W B	Room 2	3c	5YR 5/6
Plate 16.8	Jar 1c	18	1-W B	Room 3		7.5YR 6/4
Plate 18.1	Jar 3a	20	1-W B	Room 1	1a	5YR 7/6,2.5YR 5/6
Plate 18.2	Jar 3a	20	1-W B	Room 3		7.5YR 6/4
Plate 18.3	Jar 3a		1-W B	Room 3		7.5YR 6/4

Plate 18.4	Jar 3b	15	1-W B	Room 2	3c	7.5YR 7/3
Plate 18.5	Jar 3b	12	1-W B	Room 2	4c	7.5YR 6/3
Plate 18.6	Jar 3b	12	1-W B	Room 3		7.5YR 6/6
Plate 19.1	Jar 4	24		Room 5	5a	2.5YR 6/8
Plate 19.2	Jar 5	30				5YR 5/6
Plate 19.3	Jar 5	25	1-W B	Room 2	6b	7.5YR 6/4
Plate 19.4	Jar 5	25	1-W B	Room 2		7.5YR 6/4
Plate 19.5	Jar 5	20	1-W B	Room 2	9a	7.5YR 6/3
Plate 19.6	Jar 5	14	1-W B	Room 2		5YR 5/3
Plate 20.1	Jar 6	20	1-W B	Room 3		7.5YR 6/6
Plate 20.2	Jar 6	20	1-W B	Room 3		5YR 4/6
Plate 20.3	Jar 7a	20	1-W B	Room 2		
Plate 20.4	Jar 7a	15	1-W B	Room 3		5YR 5/6
Plate 20.5	Jar 7b	13	1-W A		2d	5YR 6/8
Plate 21.1	Jar 8	20	1-W B	Room 3		7.5YR 5/4
Plate 21.1	HM 1	28		Room 4	5b	5YR 5/3
Plate 21.2	Jar 8	18	1-W B	Room 3		7.5YR 5/4
Plate 21.2	HM 1	21	1-E			5YR 6/4
Plate 21.3	Jar 8	18	1-W B	Room 6		
Plate 21.3	HM 1	26	1-W B	Room 2	2b	2.5YR 6/6,7.5YR 8/2
Plate 21.4	Jar 9	20	1-W B	Room 6		7.5YR 5/4
Plate 21.4	HM 1	21	1-W B	Room 2		5YR 6/2
Plate 23.1	HM 2a	31	1-W B	Room 3		10YR 5/2,7.5YR 5/2
Plate 23.2	HM 2a	30	1-W B	Room 3		5YR 5/4
Plate 23.3	HM 2a	25	1-W B	Room 2	2b	5YR 6/4
Plate 23.4	HM 2a	22	1-W B	Room 3		5YR 5/4,10YR 5/2
Plate 23.5	HM 2a	20	1-W B	Room 3		7.5YR 4/3
Plate 23.6	HM 2a	20	1-W B	Room 3		7.5YR 6/3
Plate 23.7	HM 2a	20	1-W B	Room 3	10b	7.5YR 6/3
Plate 23.8	HM 2a	18	1-W B	Room 1		7.5YR 5/3
Plate 24.1	HM 3a	48	1-W B	Room 2		7.5YR 5/2
Plate 24.2	HM 3a	42	1-W B	Room 6		7.5YR 5/4,5YR 5/4
Plate 24.3	HM 3a	35	2-E		5b	7.5YR 6/3
Plate 24.4	HM 3a	30	1-W B	Room 6		7.5YR 4/3
Plate 24.5	HM 3a	25	2-E		5b	7.5YR 6/4

Plate 24.6	HM 3a	25	1-W B	Room 2	1e	7.5YR 6/6
Plate 24.7	HM 3a	25	1-W B	Room 3		7.5YR 6/8
Plate 24.8	HM 3a	20	1-W B	Room 3		5YR 5/8
Plate 24.9	HM 3a	20	2-E		5a	5YR 6/4
Plate 24.10	HM 3a	17	1-W B	Room 3		5YR 5/4
Plate 25.1	HM 3b	15	1-W B	Room 3		5YR 5/6
Plate 25.2	HM 3b	14	1-W B	Room 3		5YR 6/8
Plate 25.3	HM 3c	46	1-W B	Room 3	6b	5YR 6/6
Plate 25.4	HM 3c	35	1-W B	Room 2	9a	10YR 4/2
Plate 25.5	HM 3c	20	1-W B	Room 2		7.5YR 5/6
Plate 26.1	HM 3d	30	1-W B	Room 2	3c	7.5YR 5/3
Plate 26.2	HM 3d	22	1-W B	Room 3		7.5YR 5/4
Plate 26.3	HM 3d	22	1-W B	Room 3		5YR 5/3
Plate 26.4	HM 3d	18	1-W B	Room 2	3c	
Plate 27.1	HM 4	30	1-W B	Room 3		7.5YR 6/6
Plate 27.2	HM 4	30	1-W B	Room 3		5YR 4/4
Plate 27.3	HM 4	25	1-W B	Room 3		5YR 4/6
Plate 27.4	HM 4	24	1-W B	Room 3		7.5YR 6/4
Plate 27.5	HM 4	21	1-W B			2.5YR 5/4
Plate 27.6	HM 4	20	1-W B	Room 3		5YR 6/6
Plate 28.1	HM 5a	42	1-W B	Room 3	10a	5YR 3/1
Plate 28.2	HM 5a	30	1-W B	Room 2		7.5YR 4/4
Plate 28.3	HM 5a	25	1-W B	Room 2		7.5YR 6/2
Plate 28.4	HM 5a	15	1-W A			5YR 5/4
Plate 30.1	HM 7	30	1-W B	Wall 5	4c	7.5YR 6/4
Plate 30.2	HM 7	30	1-E		5b	
Plate 30.3	HM 7	30	1-W B	Room 2	3c	5YR 5/4
Plate 30.4	HM 7	20	1-W B	Room 2		7.5YR 5/8
Plate 30.5	HM 7	20	1-W B	Room 3		5YR 6/8
Plate 31.1	HM 8	30	1-W B	Room 3		7.5YR 5/2,7.5YR 6/3
Plate 32.1	HM 9a	20	1-W B	Room 3		5YR 5/6,2.5YR 5/4
Plate 32.2	HM 9a	18	1-W B	Room 3		5YR 5/6
Plate 33.1	HM 9b	20	1-W B	Room 2		7.5YR 5/3
Plate 33.2	HM 9b	15	1-W B	Room 2	2d1	5YR 6/6
Plate 34.1	HM 10a	40	1-W B	Room 3		5YR 6/4
Plate 34.2	HM 10a	37				5YR 4/4
Plate 34.3	HM 10a	30	1-W B	Room 3	6a	5YR 4/4

Plate 34.4	HM 10a	18	1-W B	Room 3		7.5YR 5/4
Plate 35.1	HM 10b	60	1-W B	Room 3		5YR 4/6
Plate 35.2	HM 10b	40	2-E		5b	7.5YR 6/3
Plate 36.1	HM 10c	22		Room 5	9a	7.5YR 5/2
Plate 36.2	HM 10c	22	1-W B	Room 2	6a	7.5YR 5/4
Plate 37.1	HM 11	40	1-W B	Room 2	4c	10YR 6/3
Plate 37.2	HM 11	38	1-E		5b	2.5YR 5/6
Plate 37.3	HM 11	36	1-W B	Room 2	6a	10YR 6/4
Plate 37.4	HM 11	25	1-W B	Room 3		5YR 5/8
Plate 37.5	HM 11	22	1-W B	Room 3		5YR 3/1,5YR 4/6
Plate 37.6	HM 11	20	1-W B	Room 3		5YR 6/6
Plate 37.7	HM 11	20	1-W B	Room 3		5YR 4/6
Plate 38.1	HM 12	32	1-W B	Room 1		7.5YR 6/3
Plate 38.2	HM 12	30	1-W B	Room 3		5YR 4/6
Plate 38.3	HM 12	29	1-W B	Room 3		5YR 3/4
Plate 38.4	HM 12	14	1-W B	Room 3		5YR 5/4
Plate 39.1	HM 13	20	1-E		3a	7.5YR 7/3
Plate 40.1	HM 14	20	1-W B	Room 2	1e	7.5YR 6/6
Plate 40.2	HM 14	12	1-W B	Room 1	3c	5YR 4/4
Plate 41.1	HM 15	21	1-W B	Room 2		7.5YR 7/4
Plate 42.1	HM 17	20	1-E			10YR 6/3
Plate 43.1	Lid	20	1-W B	Room 1		5YR 4/4
Plate 44.1	Pithoi	32	1-W B	Room 1		5YR 6/6
Plate 44.2	Pithoi	30	1-W B	Room 1		7.5YR 7/6
Plate 44.3	Pithoi	30	1-W B	Room 2		5YR 5/4
Plate 44.4	Pithoi	20	1-W B	Room 2	4c	7.5YR 8/2
Plate 45.1	Plate	50	1-W B	Room 2		7.5YR 4/2
Plate 45.2	Plate	40	1-W B	Room 2		5YR 6/4
Plate 45.3	Plate	30	1-W B	Room 3		7.5YR 4/3
Plate 45.4	Plate	30	1-W B	Room 2		7.5YR 5/3
Plate 45.5	Plate	26	1-W B	Room 3		5YR 3/4
Plate 46.1	Sieve	9	1-W B	Room 2	4c	7.5YR 6/6
Plate 47.1	Base	40	2-E		4c	7.5YR 5/4
Plate 47.2	Base	15	1-W B	Room 2	3c	5YR 6/6
Plate 47.3	Base	15	1-W B	Room 1		5YR 6/4
Plate 47.4	Base	10	1-W B	Room 2	4a	7.5YR 6/4
Plate 47.5	Base	10				7.5YR 6/3
Plate 47.6	Base	10	1-W B	Room 1		5YR 7/4
Plate 47.7	Base	10				2.5YR 6/8

Plate 47.8	Base	8	1-W B	Room 2	6a	5YR 5/6
Plate 47.9	Base	8	1-W B	Room 3		5YR 5/6
Plate 47.10	Base	5	1-W B	Room 2		7.5YR 7/6
Plate 47.11	Base	4	1-W B	Room 2	3c	7.5YR 7/4
Plate 47.12	Base	4	1-W B	Room 3		7.5YR 5/6
Plate 47.13	Base	4				10YR 8/3
Plate 47.14	Base	3	1-W B			2.5YR 6/8
Plate 48.1	Cup 1	9	1-W B	Room 2		7.5YR 5/4
Plate 49.1	Cup 2a	8	1-W B	Room 2		2.5YR 6/6
Plate 50.1	Cup 2b	10	2-E		5b	7.5YR 7/4
Plate 50.2	Cup 2b	8	1-E		5b	5YR 6/6
Plate 51.1	Cup 3	11	1-W B	Room 2		5YR 7/4
Plate 51.2	Cup 3	10	1-W B	Room 1		10YR 4/1

A.3: Ware Type Descriptions

1a	Fine Orange Ware, Burnished
1b	Fine Orange Ware, Cream Slipped
1c	Fine Orange Ware, Black Slipped
1d	Fine Orange Ware, Gritty
1d1	Fine Orange Ware, Sidekan Orange Ware
1e	Fine Orange Ware, Smoothed
1f	Fine Orange Ware, Painted
1g	Fine Orange Ware, Chaff Faced
2a	Coarse Orange Ware, Burnished
2b	Coarse Orange Ware, Cream Slipped
2c	Coarse Orange Ware, Black Slipped
2d	Coarse Orange Ware, Gritty
2d1	Coarse Orange Ware, Sidekan Orange Ware
2e	Coarse Orange Ware, Smoothed
2f	Coarse Orange Ware, Painted
2g	Coarse Orange Ware, Chaff Faced
3a	Fine Buff Ware, Burnished
3a1	Fine Buff Ware, Monochrome Burnished Ware
3c	Fine Buff Ware, Smoothed
3g	Fine Buff Ware, Cream Slipped
3h	Fine Buff Ware, Chaff Faced
4c	Coarse Buff Ware, Smoothed
4h	Coarse Buff Ware, Chaff Faced
5a	Fine Red Ware, Burnished
5b	Fine Red Ware, Smoothed
5d	Fine Red Ware, Red-Brown Slipped
6b	Coarse Red Ware, Smoothed
6c	Coarse Red Ware, Cream Slipped
6d	Coarse Red Ware, Red-Brown Slipped
6e	Coarse Red Ware, Chaff Faced
7b	Greenish Buff Ware, Coarse
8b	Soapy Ware , Coarse
9a	Cooking Pot, Brown
9b	Cooking Pot, Black Burnished
11b	Coarse Gray Ware, Smoothed
3b	Fine Buff Ware, Red-Brown Slipped
3d	Fine Buff Ware, Painted
3d1	Fine Buff Ware, Khabur Ware

3e	Fine Buff Ware, Red Slipped
3f	Fine Buff Ware, Glazed
4a	Coarse Buff Ware, Burnished
4a1	Coarse Buff Ware, Monochrome Burnished Ware
4b	Coarse Buff Ware, Brown Slipped
4d	Coarse Buff Ware, Painted
4e	Coarse Buff Ware, Red Slipped
4f	Coarse Buff Ware, Glazed
4g	Coarse Buff Ware, Cream Slipped
5a1	Fine Red Ware, Toprakkale Ware
5c	Fine Red Ware, Cream Slipped
5e	Fine Red Ware, Chaff Faced
6a	Coarse Red Ware, Burnished
6a1	Coarse Red Ware, Toprakkale Ware
7a	Greenish Buff Ware, Fine
8a	Soapy Ware , Fine
10a	Fine Gray Ware, Burnished
10b	Fine Gray Ware, Smoothed
11a	Coarse Gray Ware, Burnished
10a1	Fine Gray Ware, Monochrome Burnished Ware
11a1	Coarse Gray Ware, Monochrome Burnished Ware
6f	Coarse Red Ware, Painted
6f1	Coarse Red Ware, Urmia Ware

A.4: Pottery Typology Plates

Plate 1 - Bowl 1a

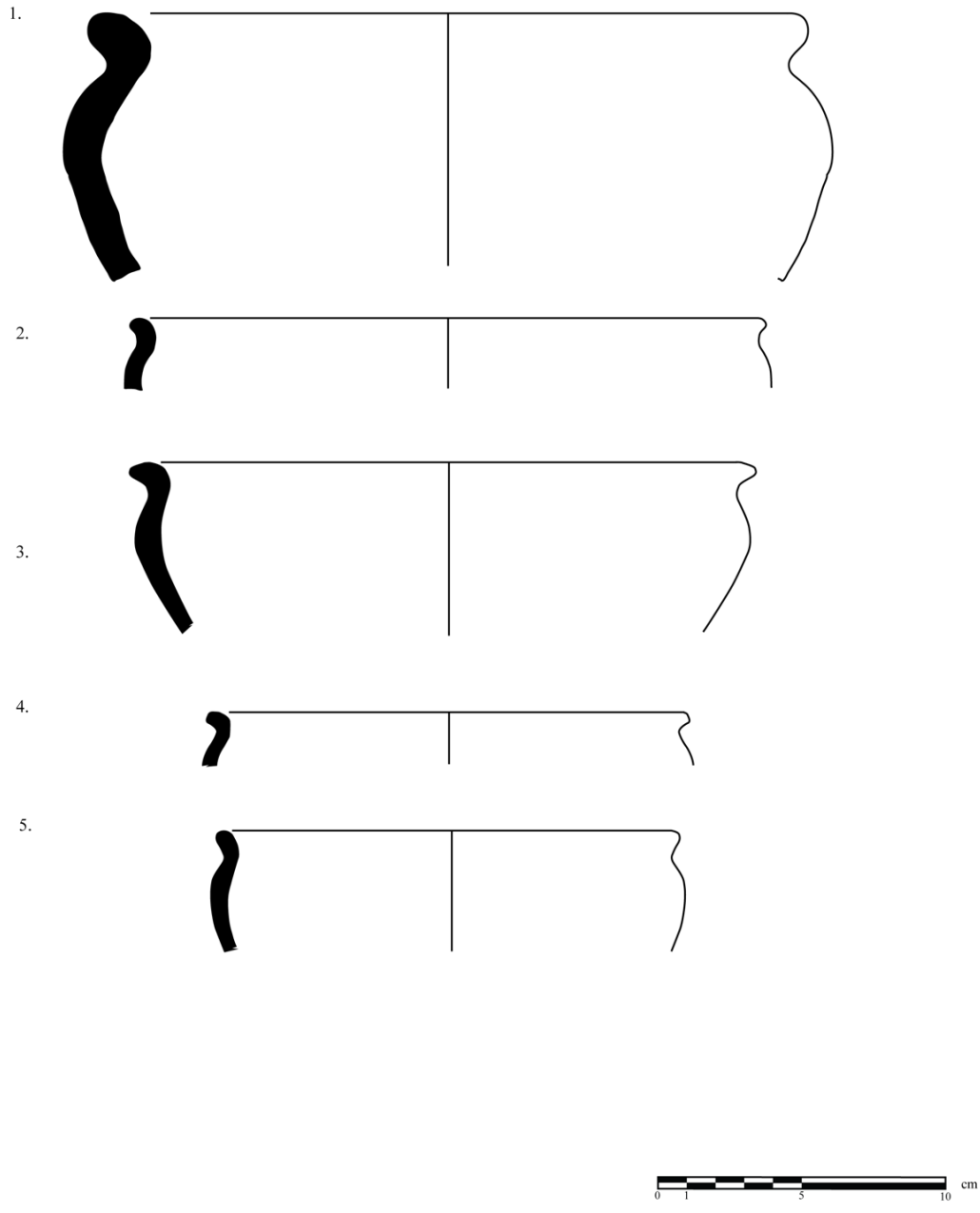
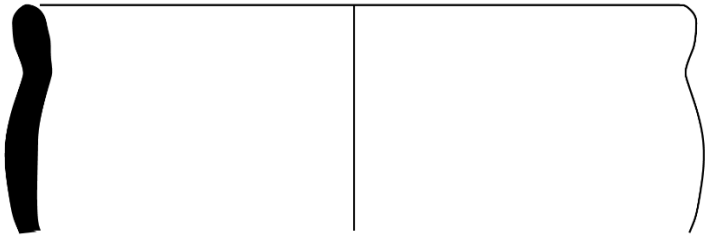


Plate 2 - Bowl 1b

1.



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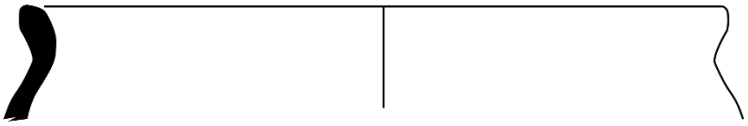

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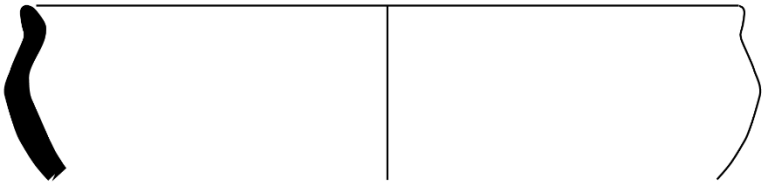


4.

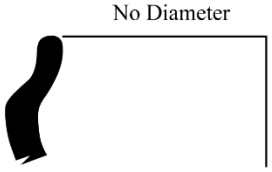


Plate 3 - Bowl 2a

1.

2.

3.

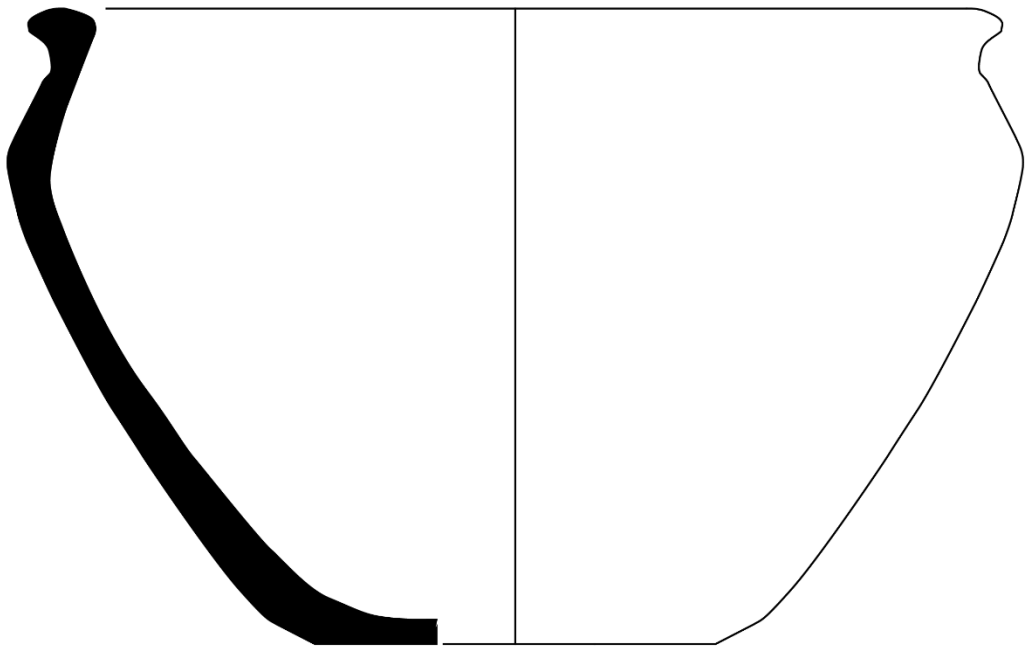


Plate 4 - Bowl 2b

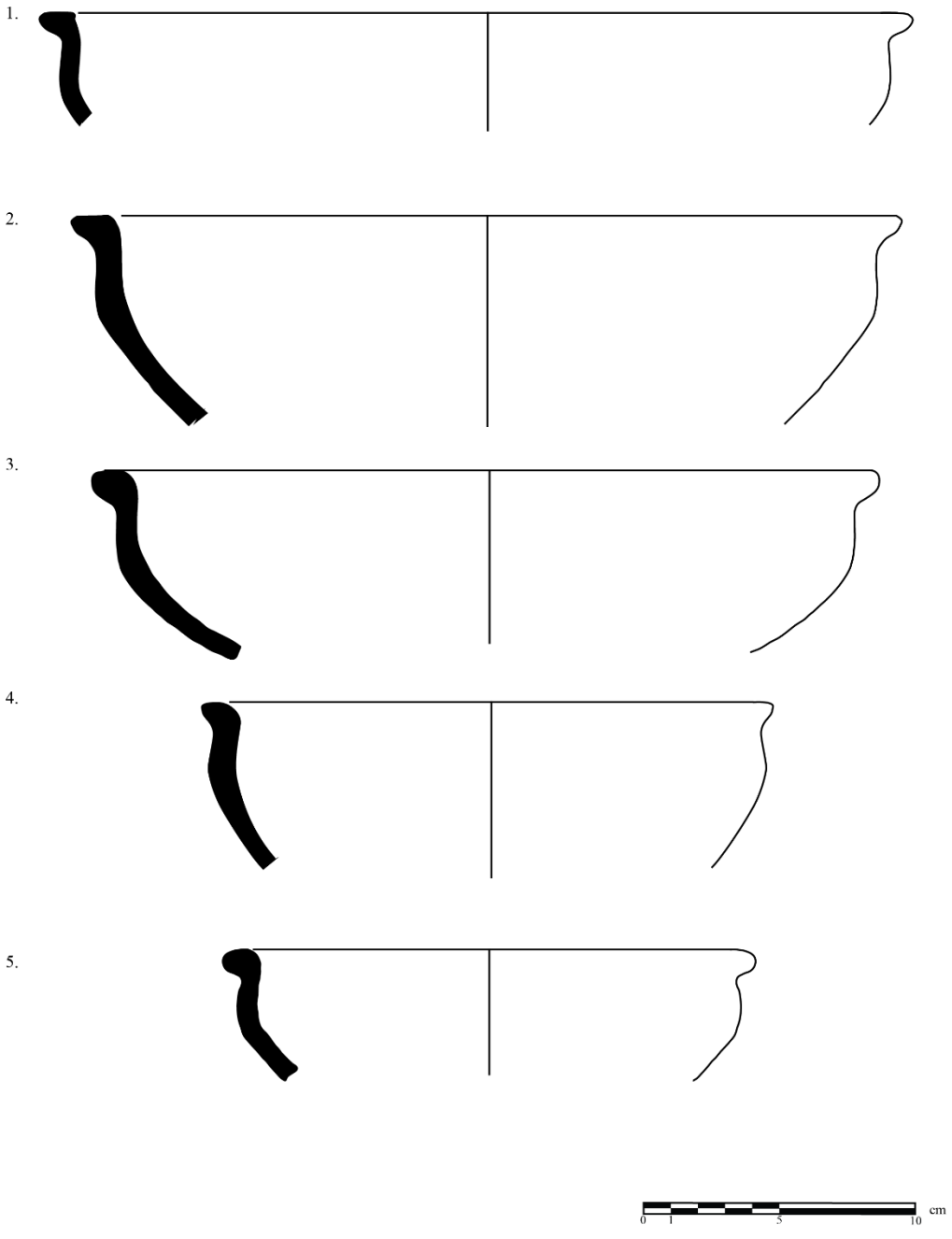


Plate 5 - Bowl 3

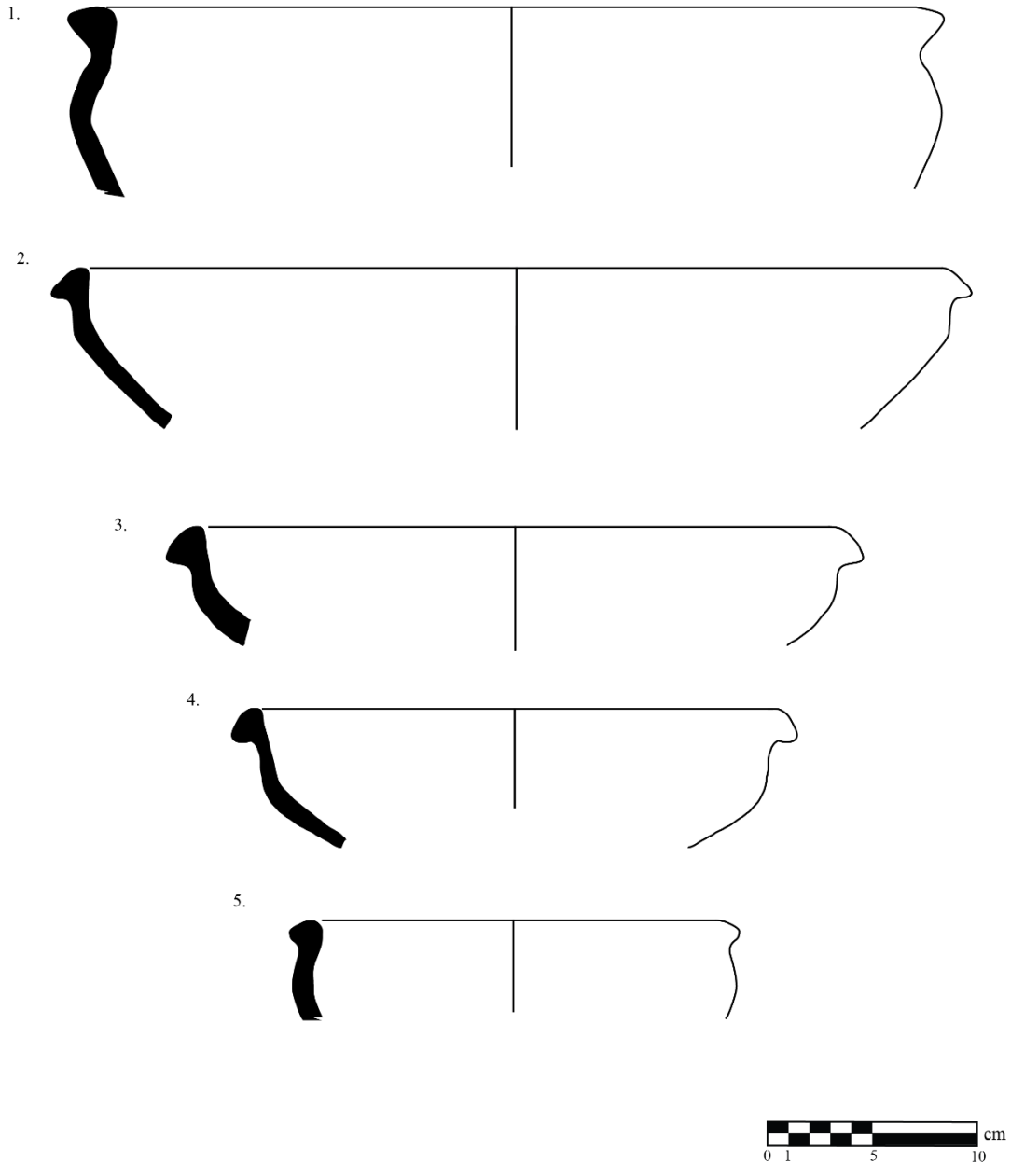


Plate 6 - Bowl 4

1.

No Diameter

2.

Bowl 5

3.

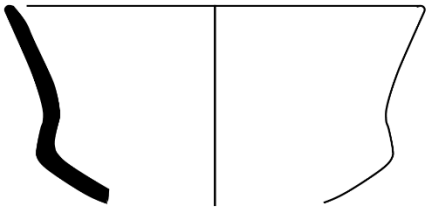
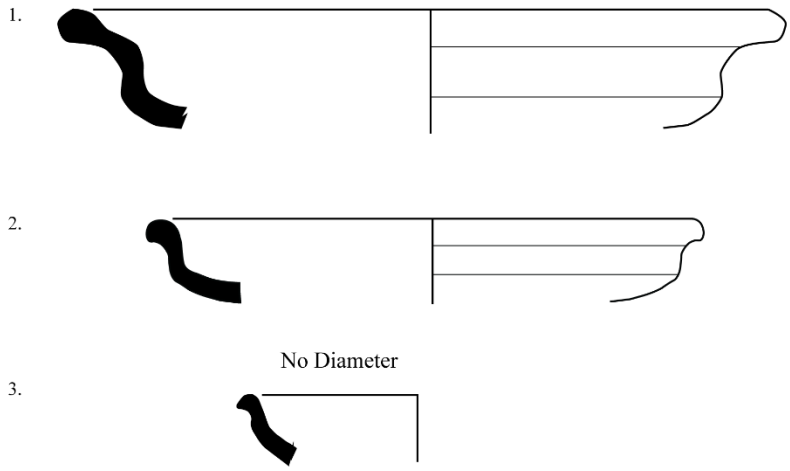


Plate 7 - Bowl 6a



Bowl 6b

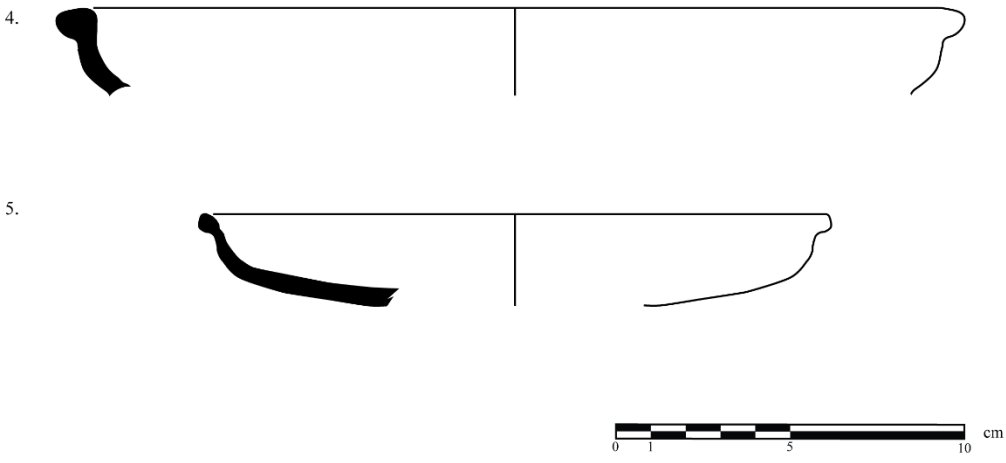


Plate 8 - Bowl 7

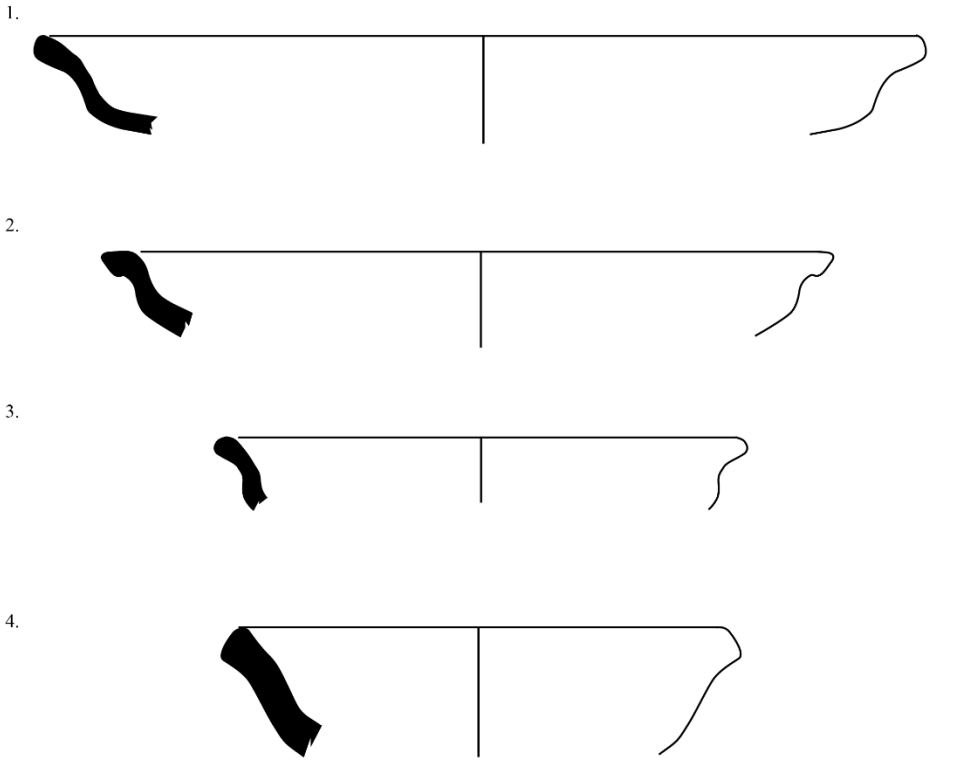


Plate 9 - Bowl 8

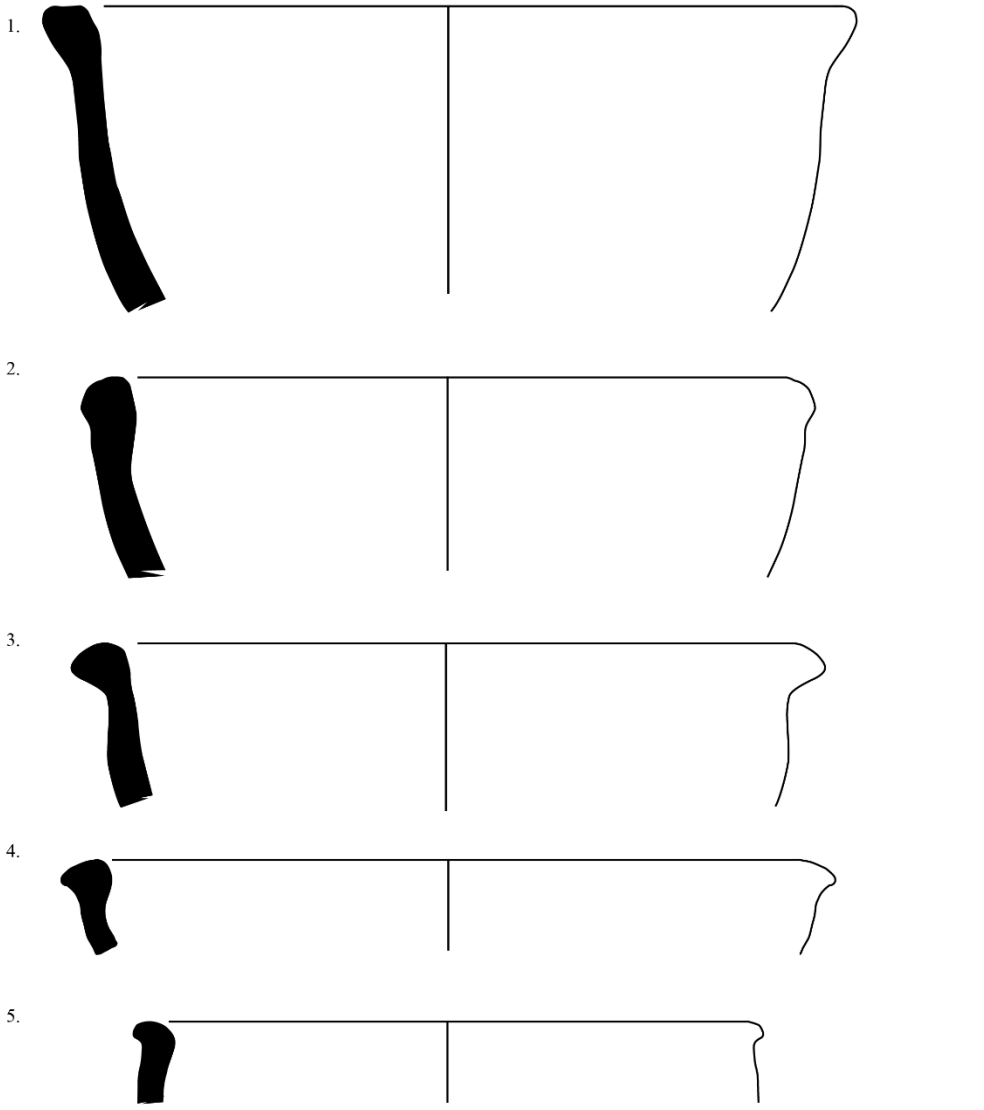
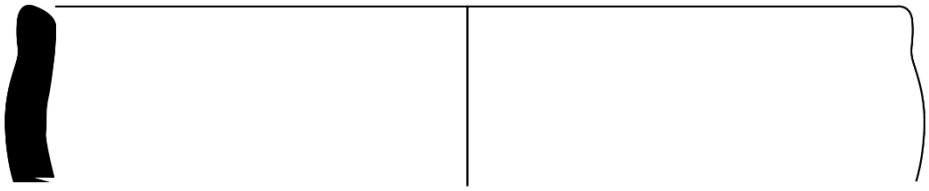


Plate 10 - Bowl 9

1.



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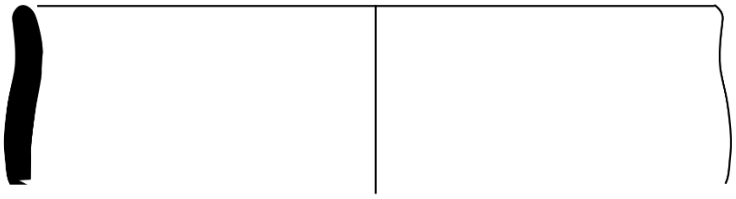
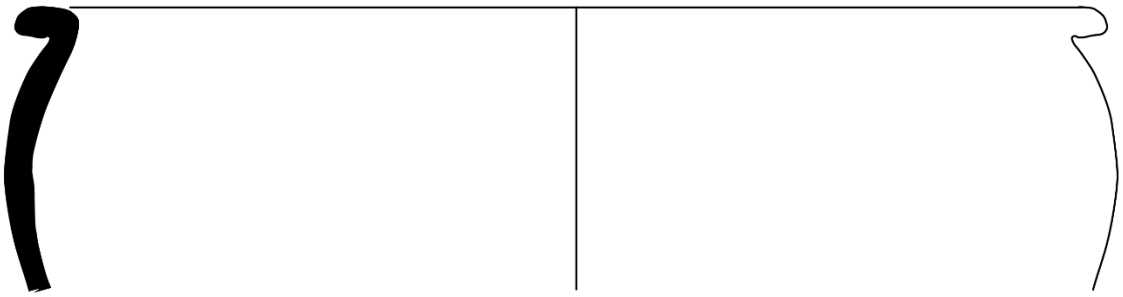


Plate 11 - Bowl 10a

1.



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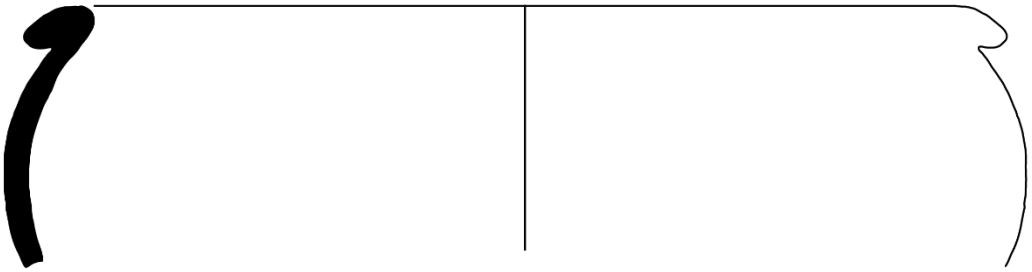


Bowl 10b

3.

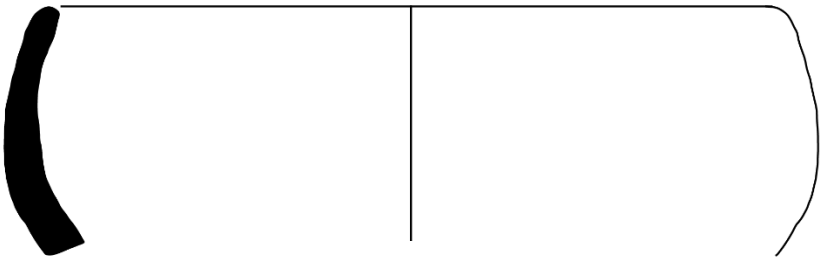
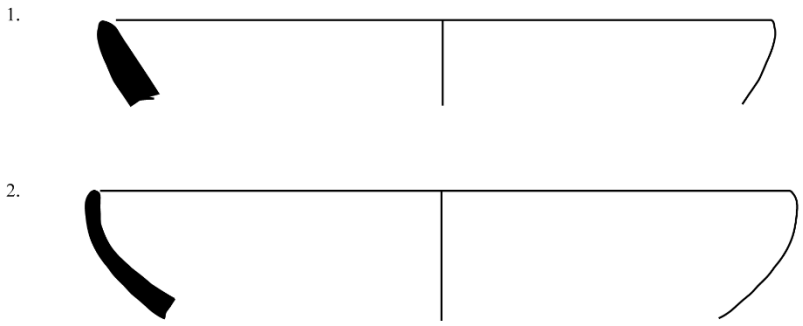


Plate 12 - Bowl 11a



Bowl 11b

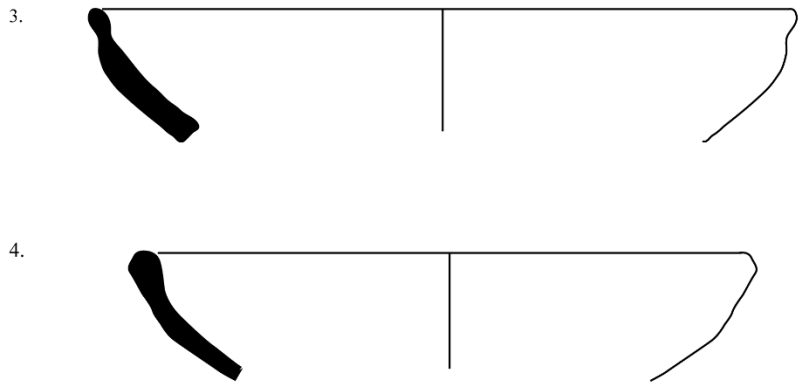
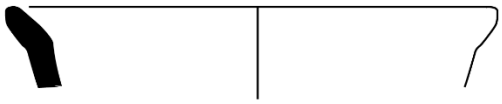


Plate 13 - Bowl 12

1.



Bowl 13

2.

Plate 14 - Jar 1a

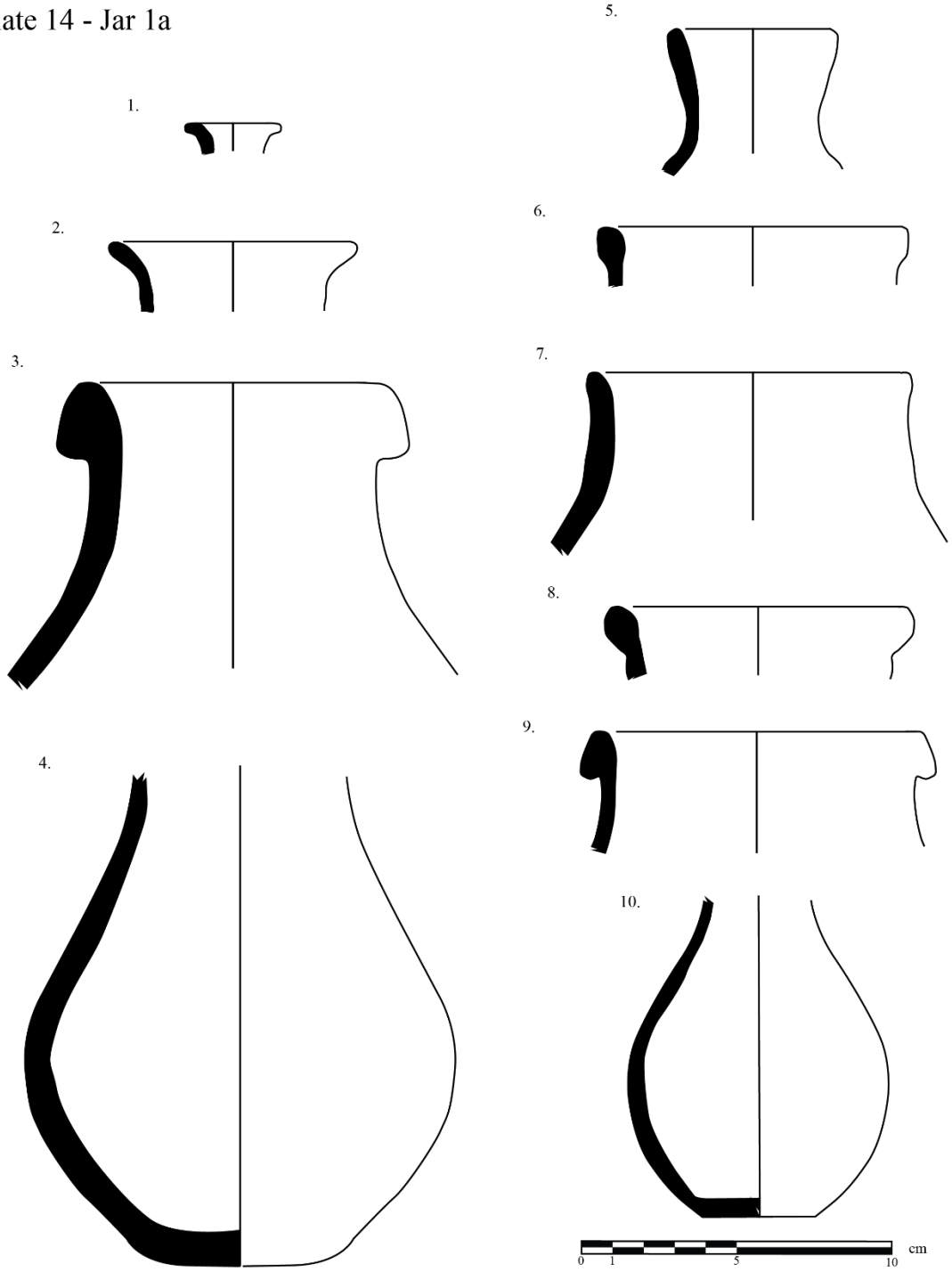


Plate 15 - Jar 1b

1.

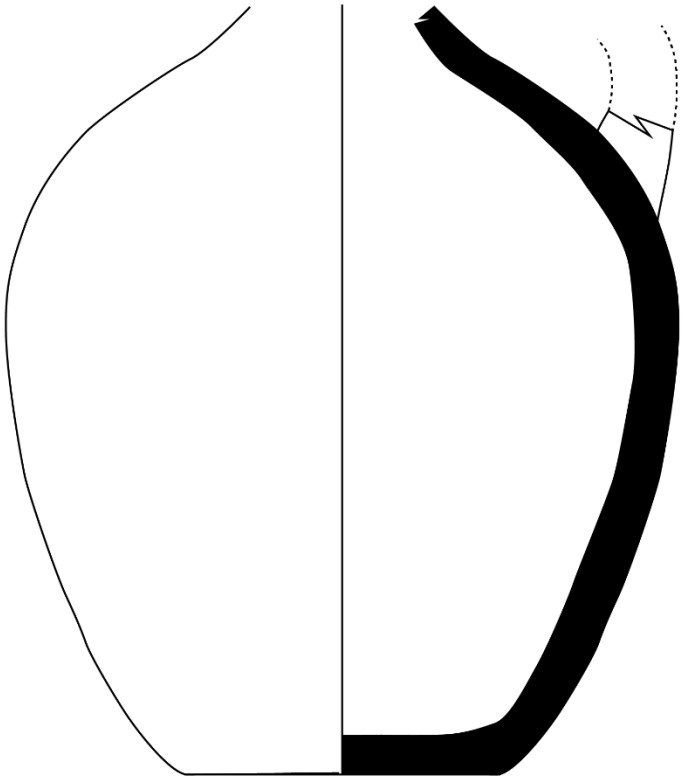


Plate 16 - Jar 1c

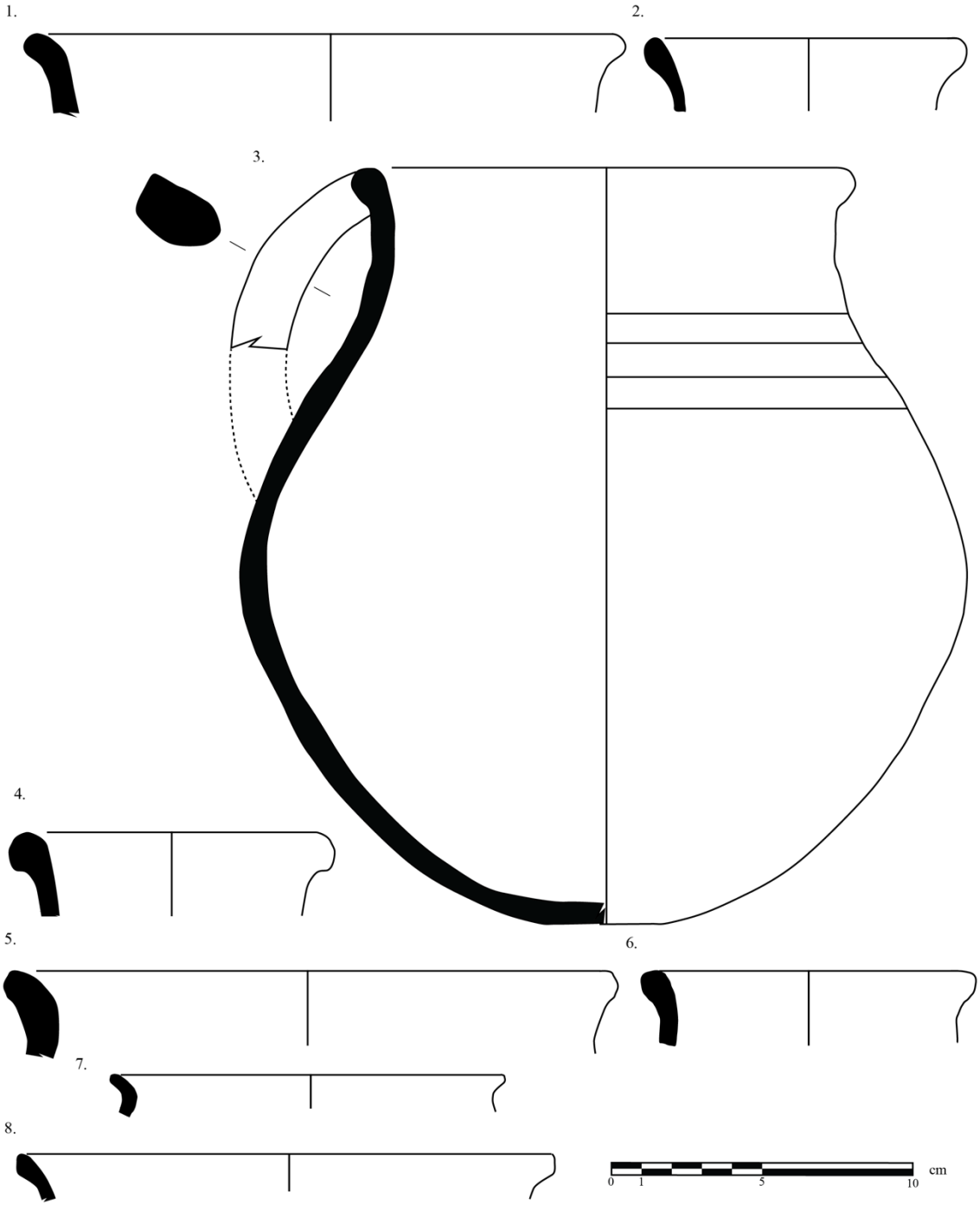
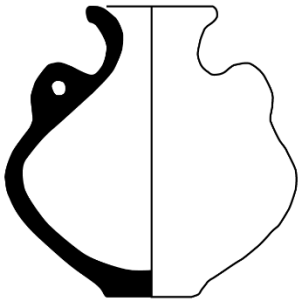


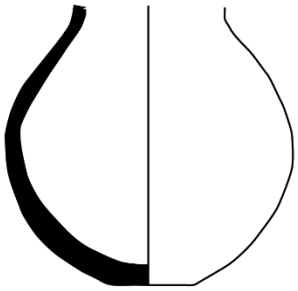
Plate 17 - Jar 2a

1.



Jar 2b

2.



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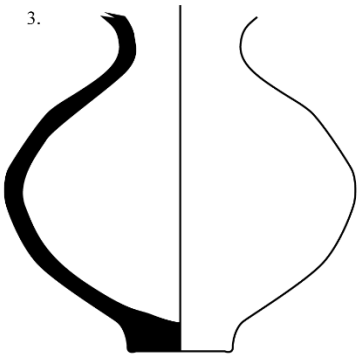
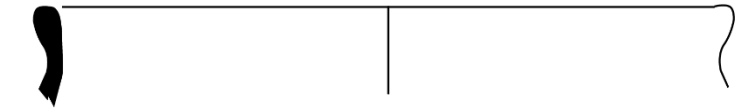


Plate 18 - Jar 3a

1.



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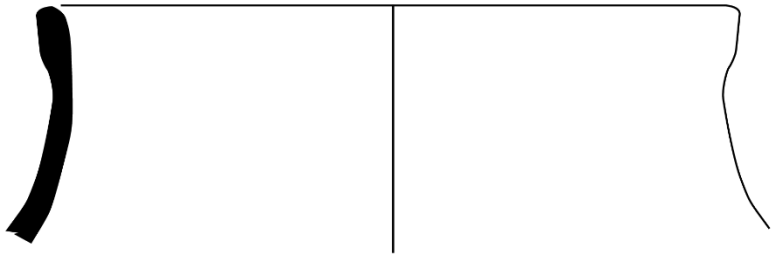
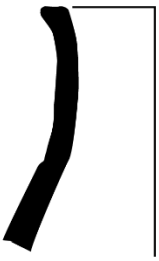
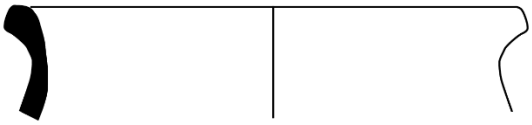


3. No Diameter



Jar 3b

4.



5.

6.

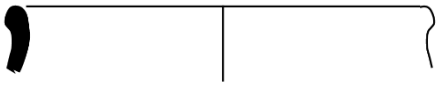
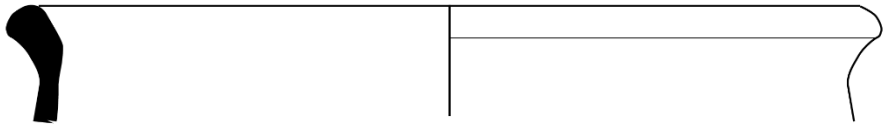


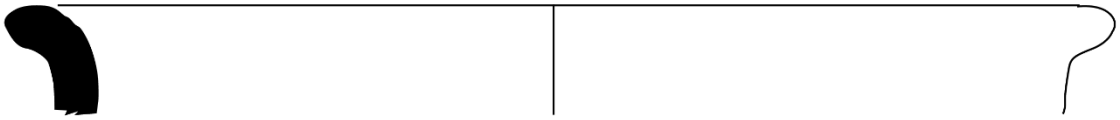
Plate 19 - Jar 4

1.



Jar 5

2.



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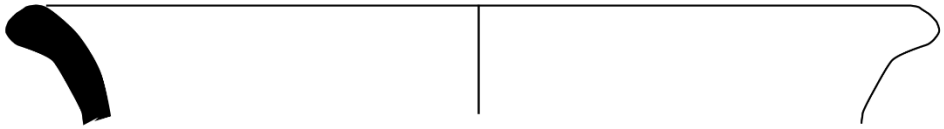

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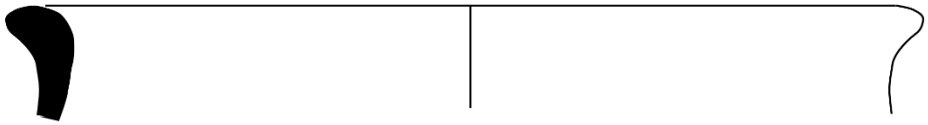

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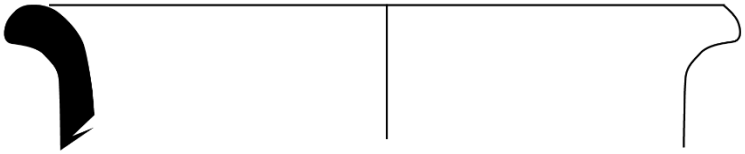
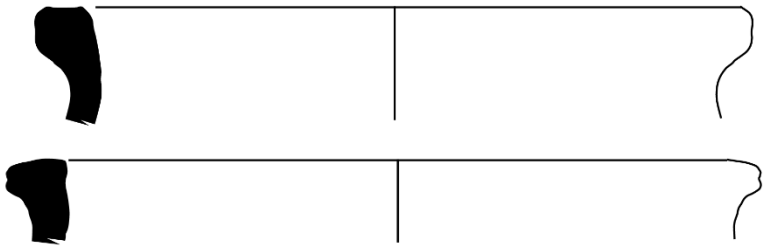


6.

Plate 20 - Jar 6

1.

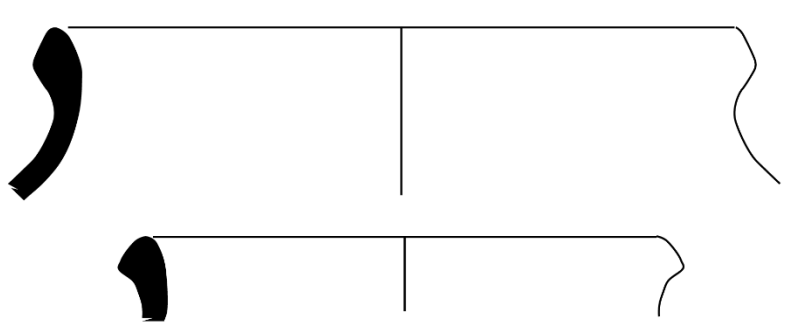
2.



Jar 7a

3.

4.



Jar 7b

5.

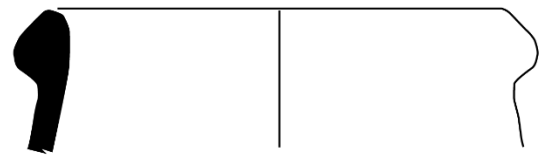
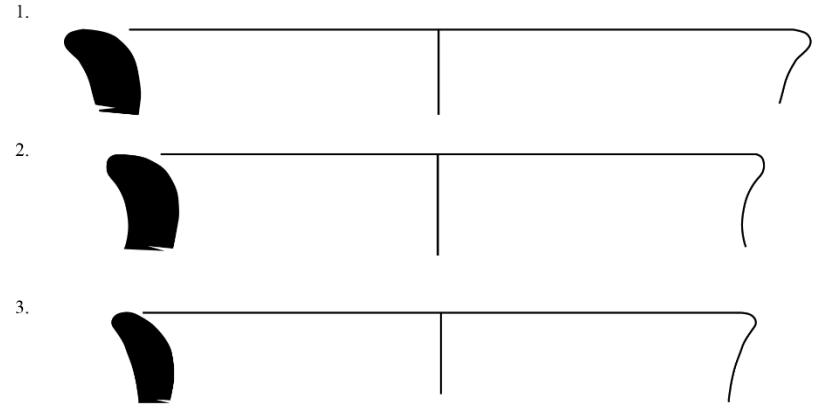


Plate 21 - Jar 8



Jar 9

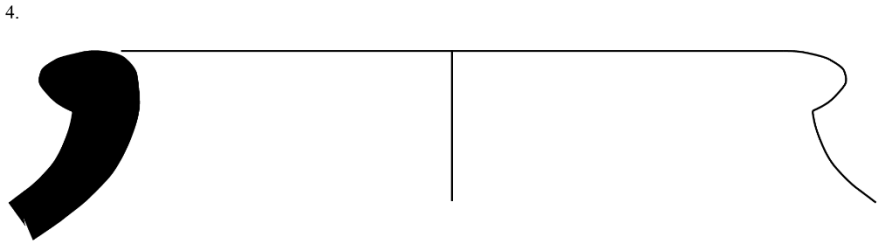


Plate 22 - HM 1

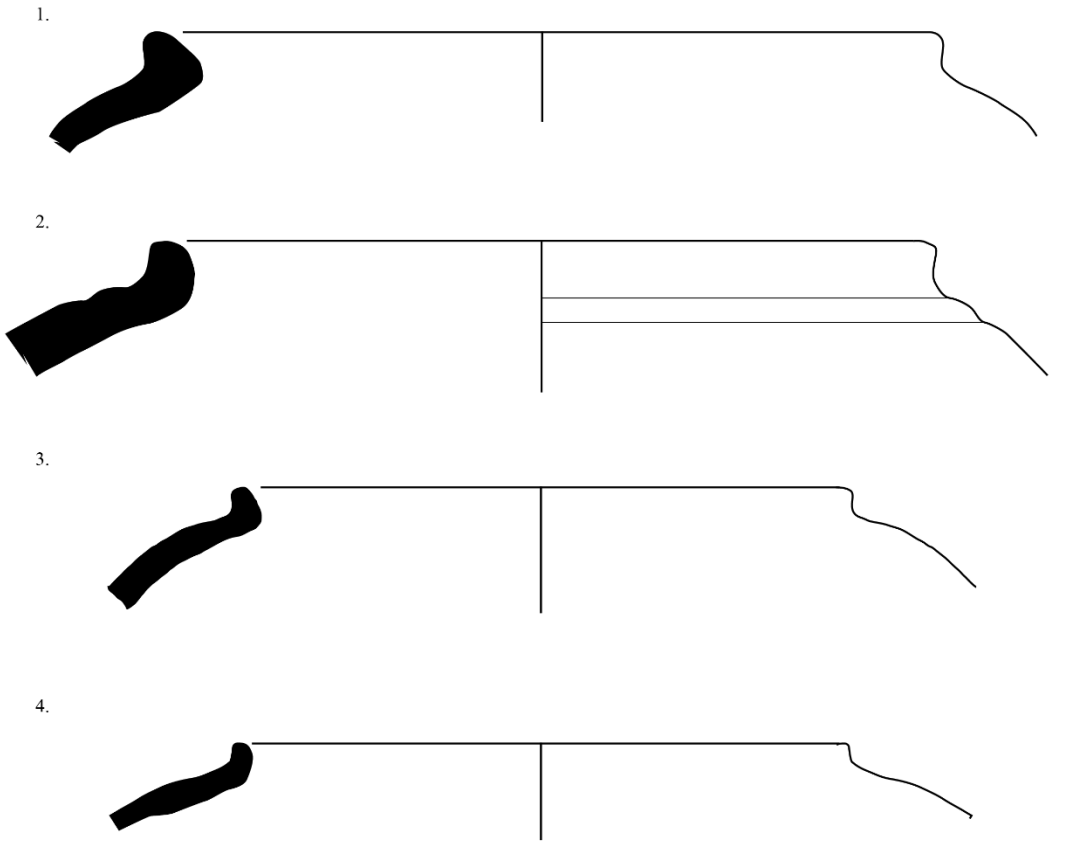


Plate 23 - HM 2a

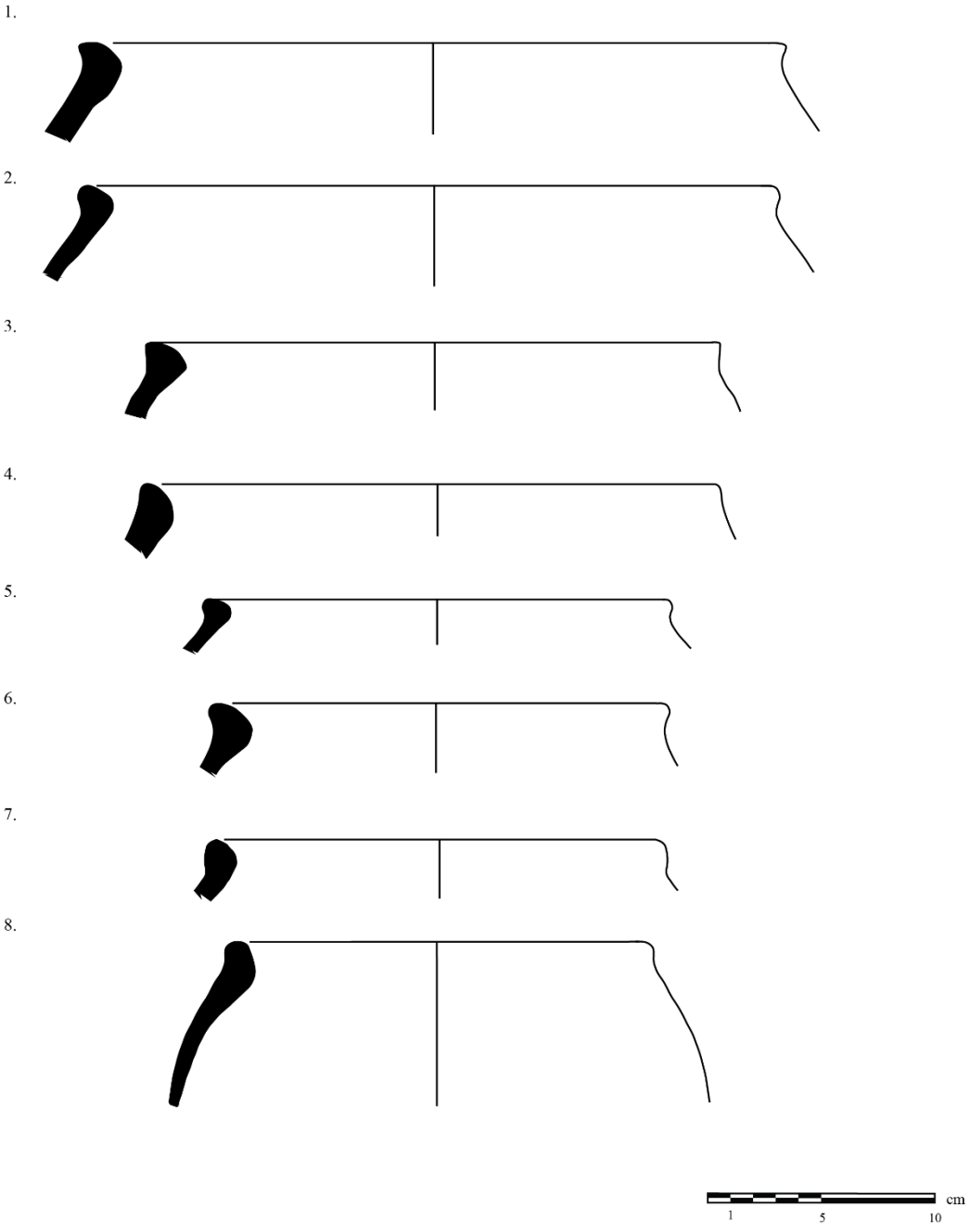


Plate 24 - HM 3a

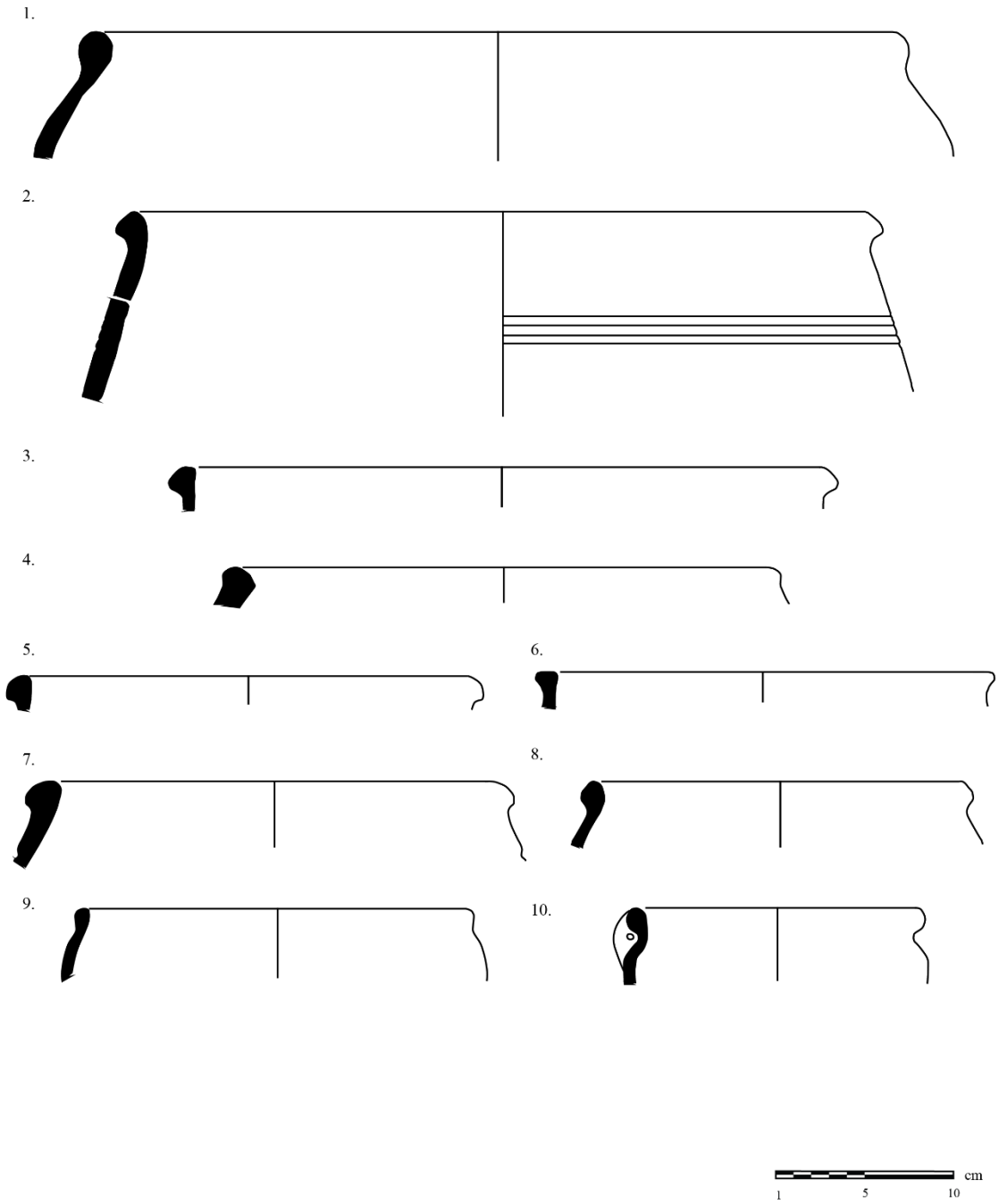
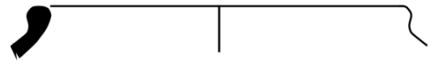


Plate 25 - HM 3b

1.



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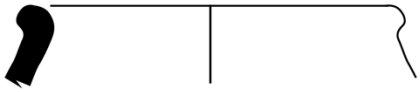
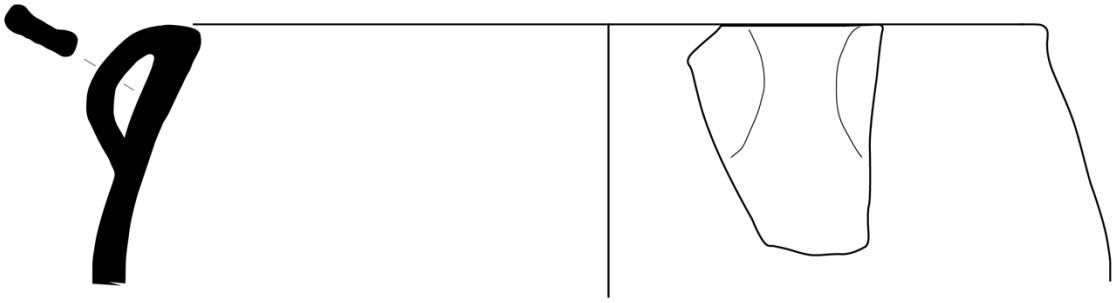


HM 3c

3.

4.



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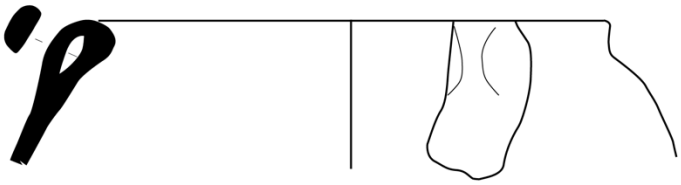
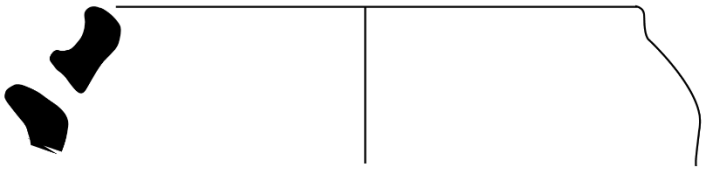


Plate 26 - HM 3d

1.

2.



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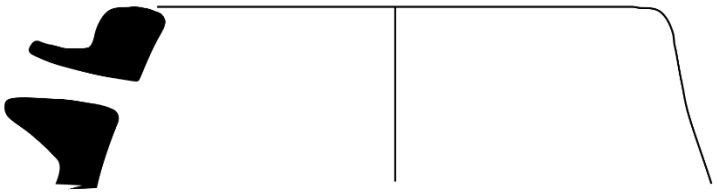

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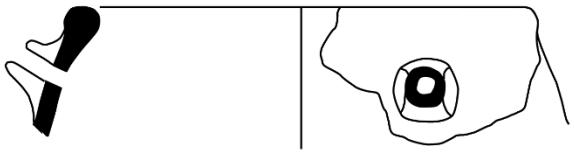


Plate 27 - HM 4

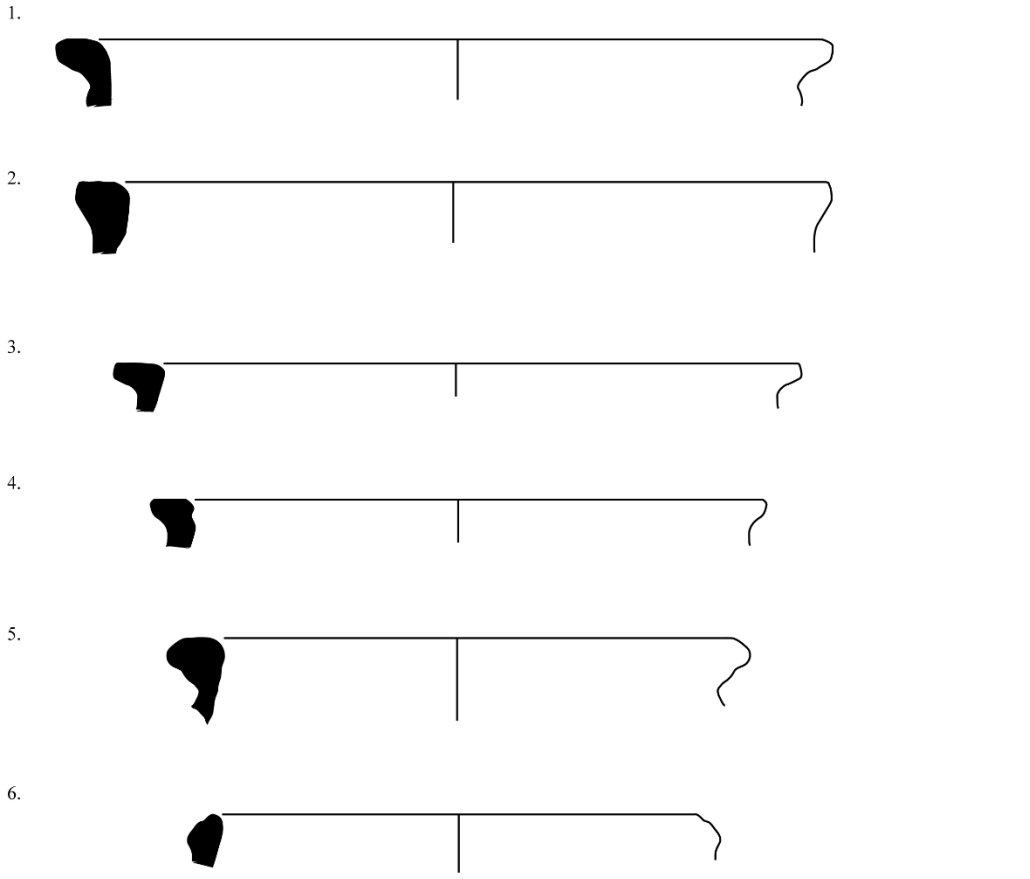
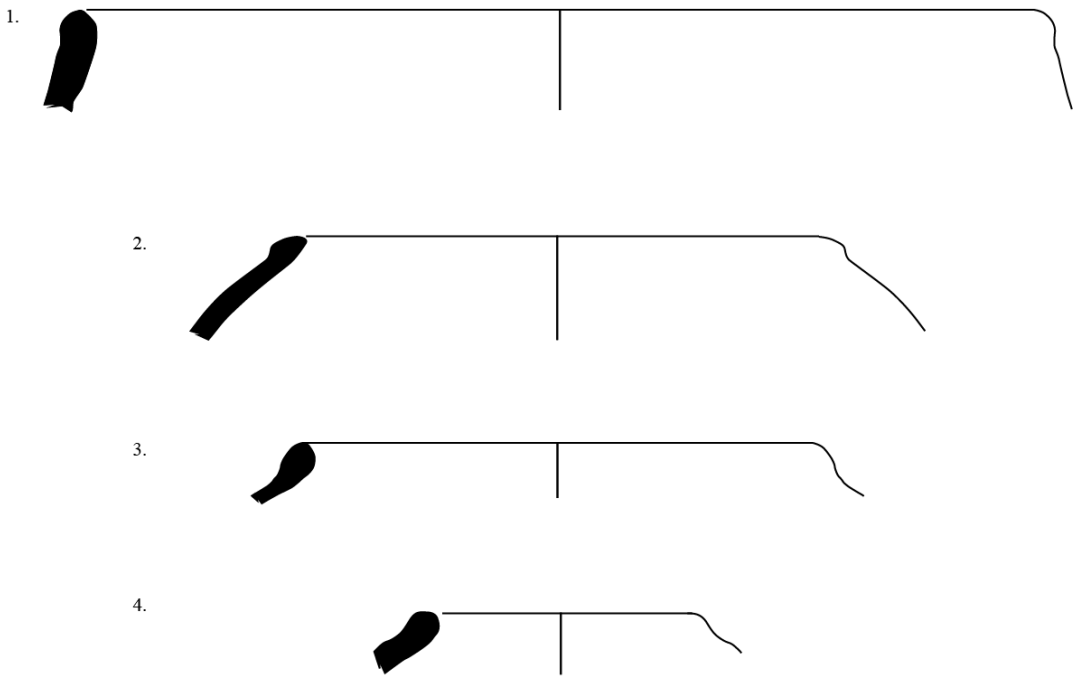


Plate 28 - HM 5a



HM 5b

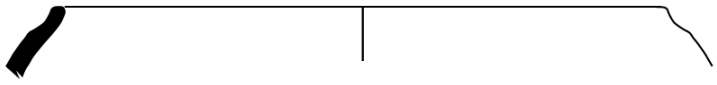
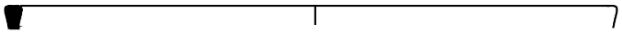


Plate 33 - HM 6

1.



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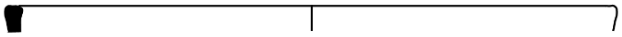


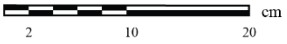


Plate 30 - HM 7

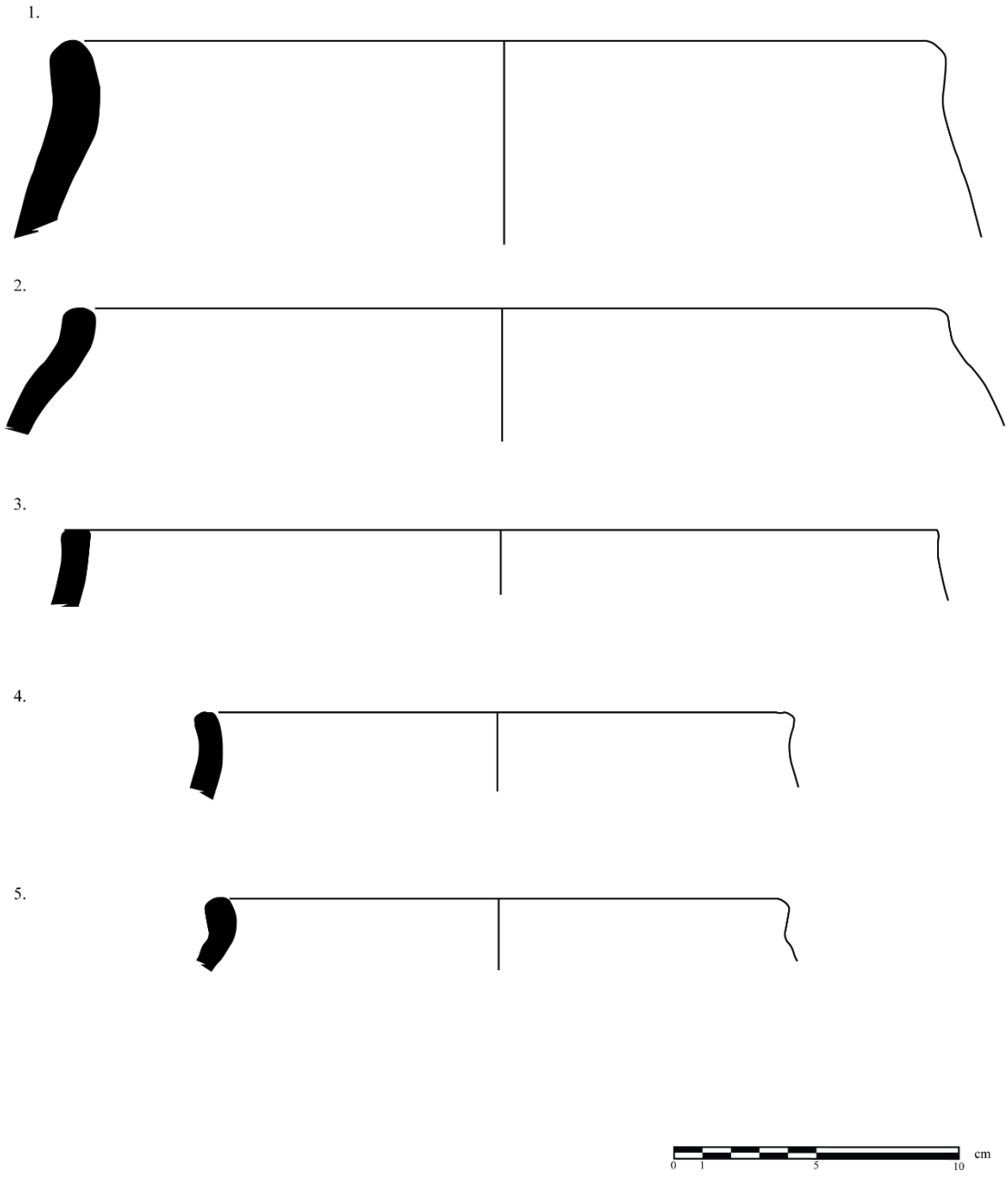


Plate 31 - HM 8

1.

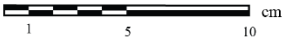


Plate 32 - HM 9a

1.

2.

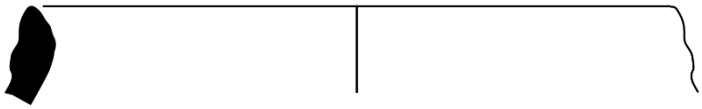


Plate 33 - HM 9b

1.

2.

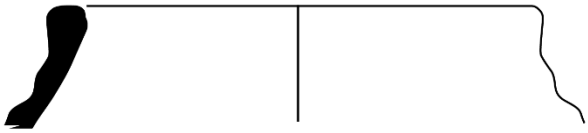
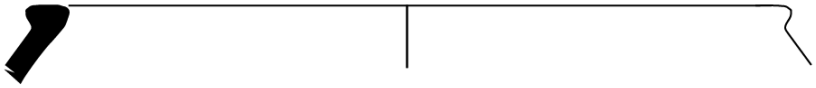


Plate 34 - HM 10a

1.

2.

3.



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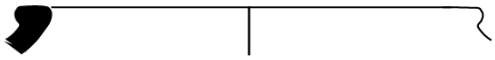
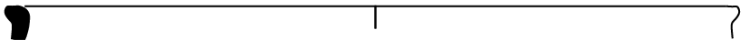


Plate 35 - HM 10b

1.



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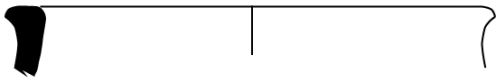

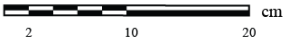

Plate 34 - HM 10c

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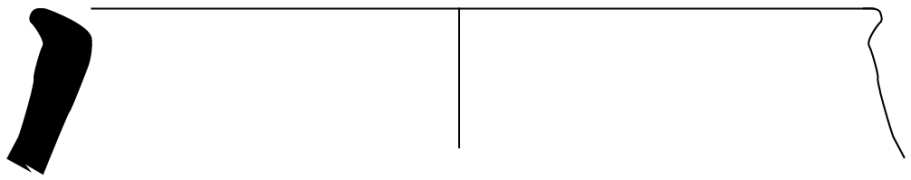

Plate 37 - HM 11

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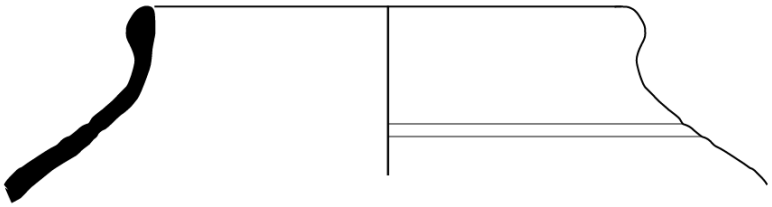

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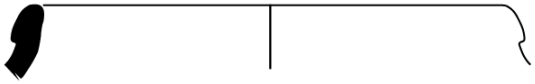

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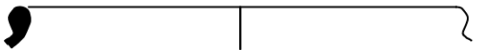

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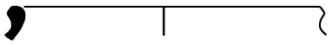

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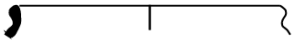

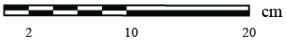

Plate 38 - HM 12

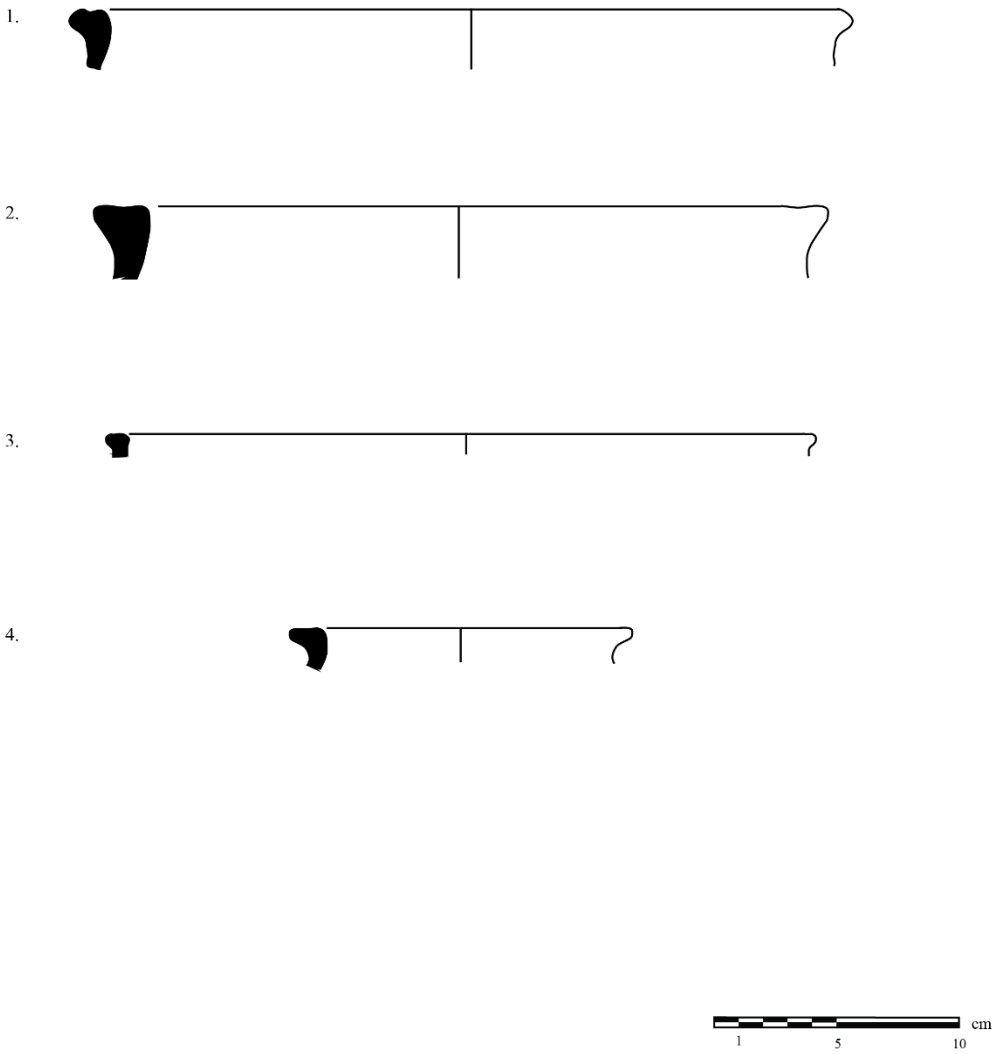

Plate 39 - HM 13

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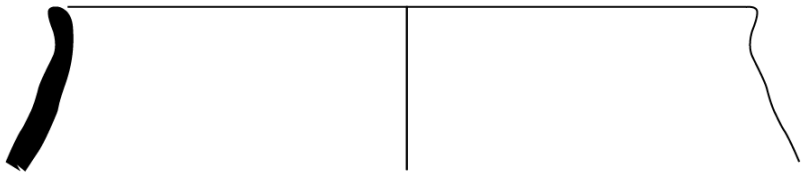

Plate 40 - HM 14

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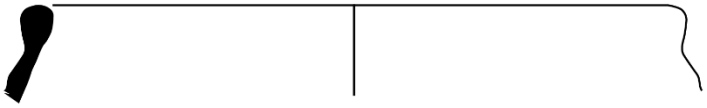

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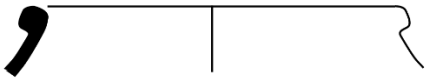

Plate 41 - HM 15

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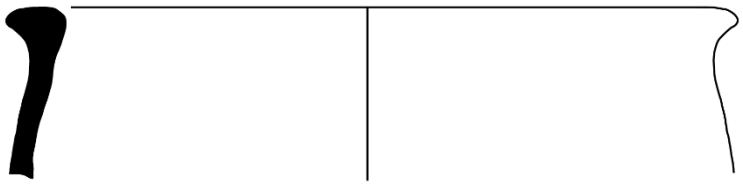

Plate 42 - HM 17

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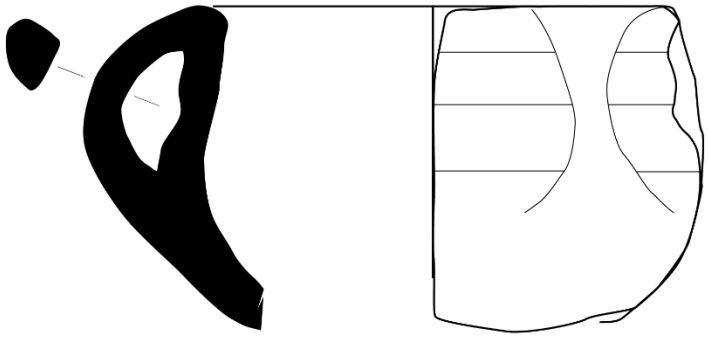


Plate 43 - Lid

1.

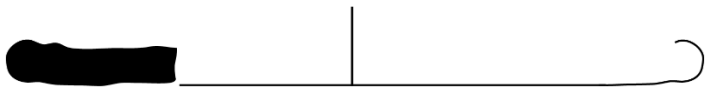


Plate 44 - Pithoi

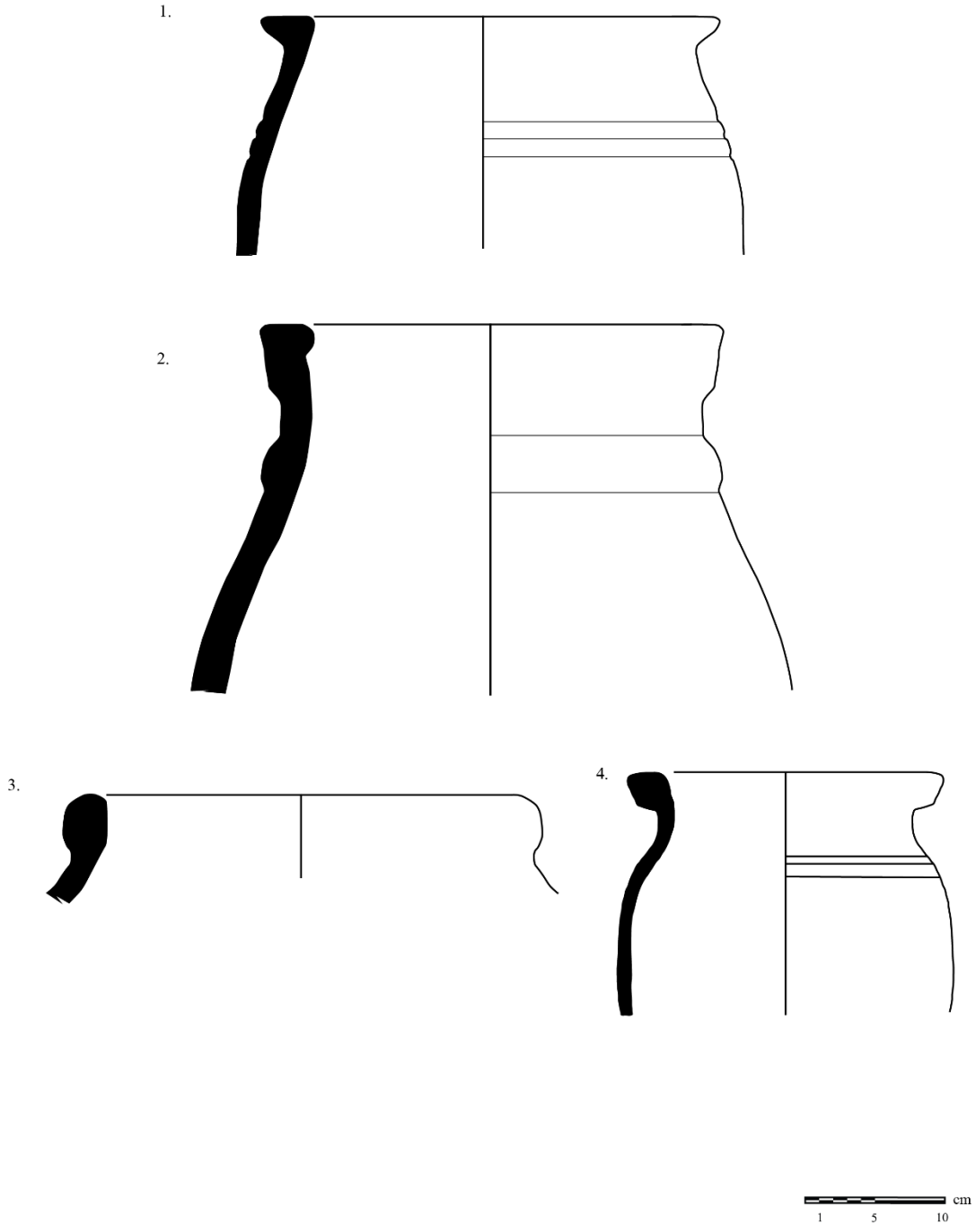
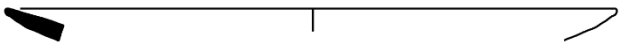


Plate 45 - Plate

1.



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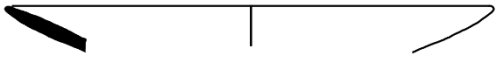

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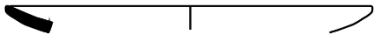

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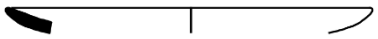

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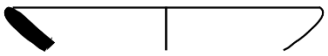

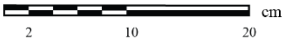

Plate 46 - Sieve

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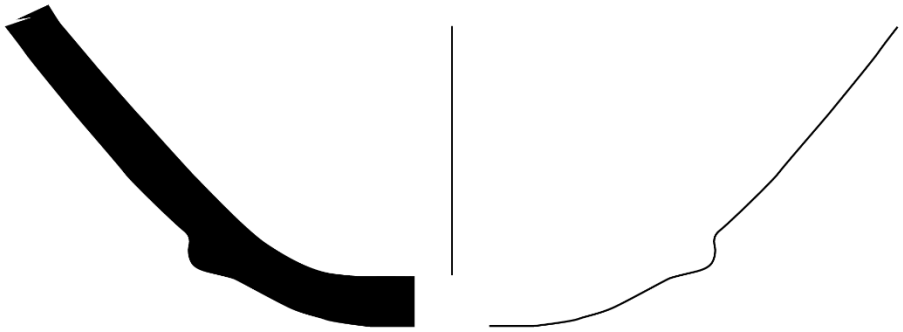


Plate 47 - Base

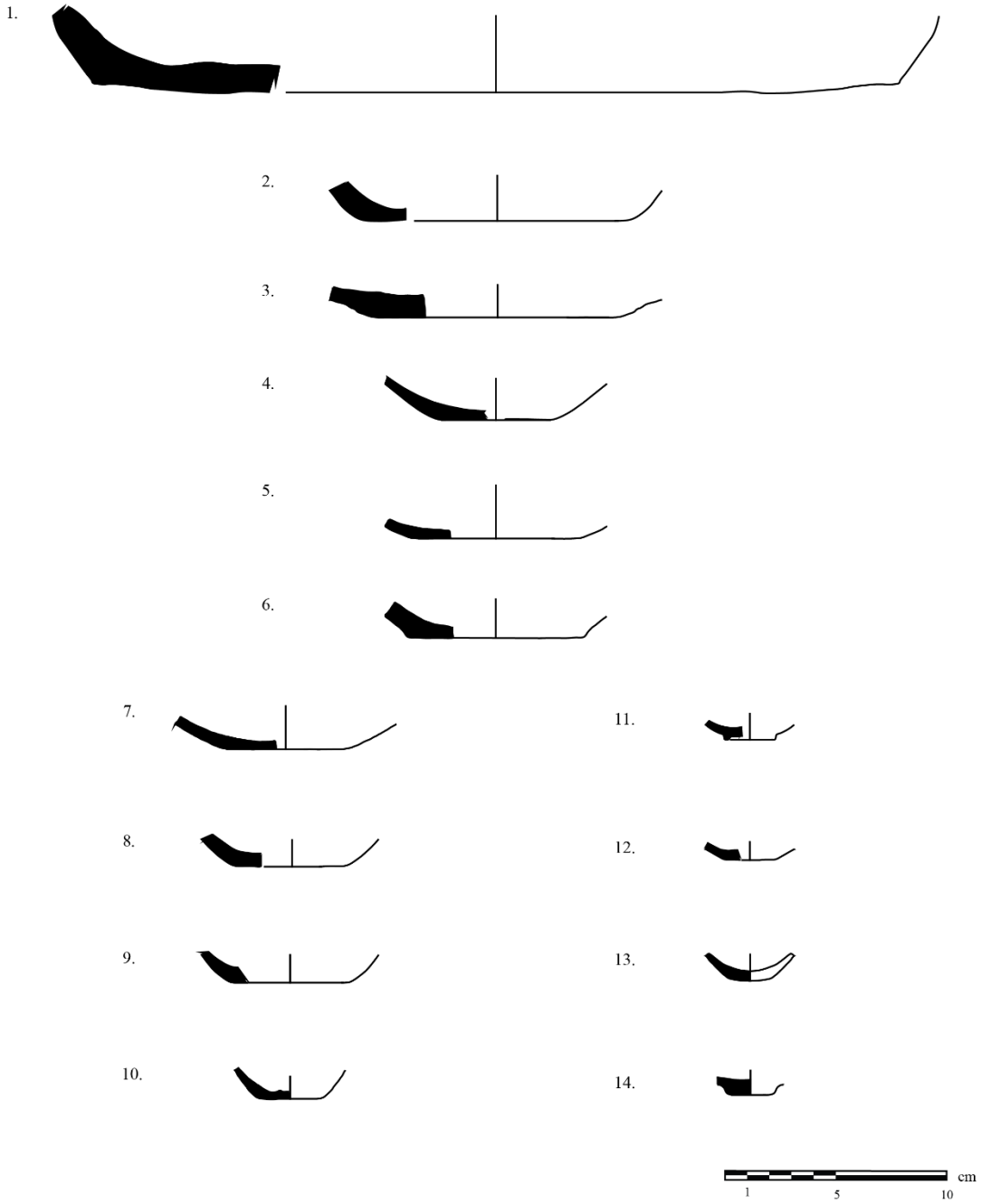


Plate 48 - Cup 1

1.

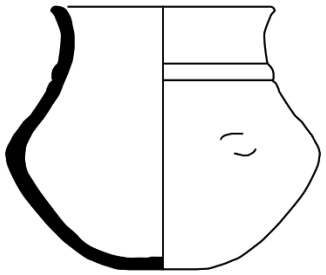
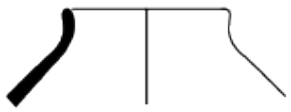
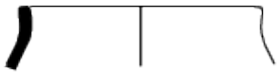


Plate 49 - Cup 2a

1. 

Cup 2b

1. 

2. 

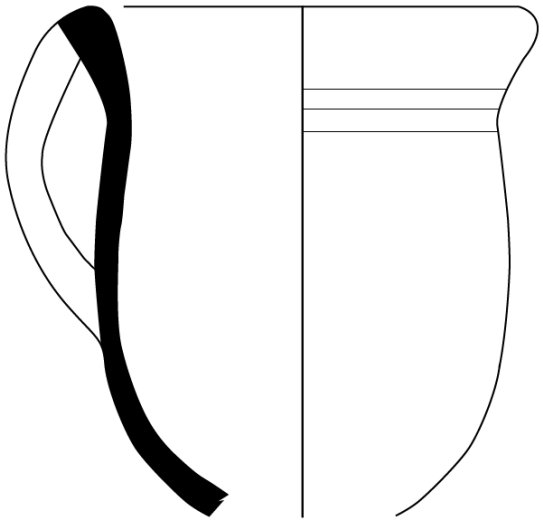
Plate 50 - Cup 3

1.

2.

Plate 51 - Cup 4

1.



Appendix B: Survey Gazetteer and Pottery

B.1: Survey Gazetteer

RAP01 -

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Mound	36.59417, 44.53056

Site Visit Date:	5/28/2013	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Road Cut/Construction	Gravel production facility.		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP02 -

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Rock Shelter	36.59944, 44.53111

Site Visit Date:	5/28/2013	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	Gorge Entrance		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP03 – Karak

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Unmounded Site	36.58222, 44.51861

Site Visit Date:	5/30/2013	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	Slopes beneath cliffside		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP04 -

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran			36.58805, 44.51333

Site Visit Date:	5/30/2013	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	Abutting side of ridge		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP05 -

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Standing Architecture	36.58861, 44.51361

Site Visit Date:	5/30/2013	Military Occupation?:	✔	Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	Top of ridge overlooking road		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP06 -

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Unmounded Site Military Installation	36.58889, 44.5125

Site Visit Date:	5/30/2013	Military Occupation?:	✔	Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	Side of ridge near creek		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP07 – Qalat Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Qalat	36.79452778, 44.62702

Site Visit Date:	Military Occupation?:	Visible Architecture?:
6/1/2013	✔	✔

Locating Method:	Site Location:	Description:	Site Size:
Already Known	Fortification on hill overloooking Mudjesir & Sidekan River below.	The exposed architecture of both the surrounding fortification wall and central, rectangular building, described by Boehmer, remains visible. Limited excavation revealed characteristic Assyrian flooring.	.93 Hectares

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III	Boehmer 1973, Danti Forthcoming	0

Survey Pottery Drawing Plate:	Select Site Photos:
	 

RAP08 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Mound Buried Architecture Field Scatter	36.79880556, 44.63138

Site Visit Date:	6/1/2013	Military Occupation?:	✔	Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Local Led To	Field adjacent to the village of Mudjesir. Little visible architecture except for column bases scattering the surface around the field.	Overgrown w/ vegetation. Bulldozer flattened the surface. Same area as the Mudjesir field excavation, with a large drain.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III	Boehmer 1973, Danti and Ashby Forthcoming	0

Survey Pottery Drawing Plate:
Plate 52.1, Plate 52.2

Select Site Photos:

RAP09 – Qalaat Zerr

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Mound Qalat	36.58338889, 44.53511111

Site Visit Date:	6/5/2013	Military Occupation?:	✔	Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature Local Led To	Top of natural butte. Small plateau. Slopped approach opposite gorge entrance.		.15 Hectares

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP10 -

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Standing Architecture	36.57766667, 44.52219444

Site Visit Date:	5/31/2013	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	In ⁄Cow Cleft⁄ next to stream bed. Constructed on Terrace along hills		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP11 – Qalaat Lokan

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Qalat	36.62130556, 44.53466667

Site Visit Date:	6/5/2013	Military Occupation?:	✔	Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Already Known	Mound on road to Rawanduz. High Point- Qal-at. Between switchbacks on road. Natural line of sight to gorge entrance.		818 m^2

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP12 – Shanidar Cave

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Mergasur		Mound Qalat	36.83469444, 44.21916667

Site Visit Date:	6/15/2013	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Already Known	In pass in Baradost Range. Located high up mountain pass- long walk up.		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP13 – Eich Qalaat

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Qalat	36.63147222, 44.53836111

Site Visit Date:	6/18/2013	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Already Known	High hill overlooking Gorge + Rawanduz. Soran to the north. South facing sides steep		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP14 – Banahilk

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Mound	36.66463889, 44.53686111

Site Visit Date:	6/20/2013	Military Occupation?:	✔	Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Already Known	Near Diana - covered w/ homes. At the top of road cut. Overlooks main road between Diana town and Diana Plain.		*** (see patty jo?)

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP15 – Gird Khiwet

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Mound	36.67797222, 44.49472222

Site Visit Date:	6/25/2013	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Small village to E of road to Mergasur. Modern village built to the S of mound. Small creek to N of mound		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP16 – Ghabrestan-i Topzawa

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Sidekan & Eastern Valleys	Tomb	36.83, 44.76222222

Site Visit Date:		Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Construction Road Cut/Construction	Along Topzawa Chay and Topzawa Road. Cut by road construction. West of the beginning of the road's switchback into the mountains.	Stone-built tomb with slate roofing cut by road construction.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Achaemenid (or Iron IV)		0

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP17 – Gund-i Topzawa

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Sidekan & Eastern Valleys	Unmounded Site Standing Architecture	36.8175, 44.73472222

Site Visit Date:	6/8/2014	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Construction Road Cut/Construction	Built into the southern hillsides of the northern hills along the road in the Topzawa Valley.	Extensive visible architecture was observed in the road cut before excavation. Survey identified at least six buildings. Three buildings were excavated.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		0

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP18 – Gird-I Dasht

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Mound	36.68055556, 44.51583333

Site Visit Date:		Military Occupation?:	✔	Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Already Known	Diana Plain		4.8 ha

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP19 – Gird-i Schkenne

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Revisits (Boehmer)	Mound	36.792225, 44.686765

Site Visit Date:	6/17/2014	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Already Known	On the hill near the confluence of the Topzawa and Bora Cay Rivers. Overlooks Sidekan to the west.	Walls slightly visible on NW and SW slopes of hillside. Large mounding of collapsed walls of the house in the center of the small mound.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III	Boehmer 1973, Lehmann-Haupt 1931	0

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP20 – Gund-i Pird Topzawa

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Sidekan & Eastern Valleys	Unmounded Site	36.810254, 44.718133

Site Visit Date:	6/15/2014	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	A small escarpment along a small path at the base of the Topzawa Valley, near a ford in the river.	Some stratification of the section visible. The site is a collection of sherds found in the cut.	15 m

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		0

Survey Pottery Drawing Plate:	Select Site Photos:
	 

RAP21 – Gund-i Tre Topzawa

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Sidekan & Eastern Valleys	Unmounded Site Standing Architecture	36.812549, 44.721042

Site Visit Date:	6/15/2014	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Construction	North, alongside the Topzawa Valley road, below a small vineyard. West of Gund-i Manga.	Large walls and cut into bedrock. An arched roof possibly visible in the section over a room. Possible triangle wall. Evidence of front wall.	10 m

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable] Iron III		0

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP22 – Gund-i Bina Topzawa

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Sidekan & Eastern Valleys	Unmounded Site Standing Architecture	36.809134, 44.700283

Site Visit Date:	6/15/2014	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Construction	North, alongside the Topzawa Valley road, west between Gund-i Topzawa and Sidekan.	Large Wall with multiple levels of construction visible running roughly parallel with the road. Still appears to be intact. One large section visible but small sections with some stones aligned with that section visible.	10 m

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
"Islamic" Iron III		0

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP23 – Gund-i Manga

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Sidekan & Eastern Valleys	Unmounded Site Standing Architecture	36.814519, 44.727161

Site Visit Date:	Military Occupation?:	Visible Architecture?:
6/10/2014		✔

Locating Method:	Site Location:	Description:	Site Size:
Construction	North, along the road in the Topzawa Valley, near a small north-south valley.	Cut walls in section. 3 m apart in section. Multiple rooms, as many as 3 visible. Intact room (cow collapse hole) with ceiling and back wall visible from a small clearing of the hole fill.	30 m

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		0

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 53.3, Plate 53.1, Plate 53.2	 

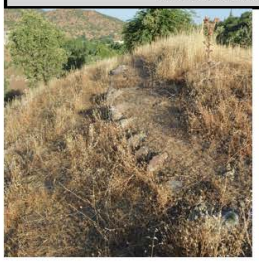
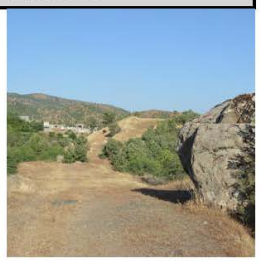
RAP24 – Gird-i Newan do Rubar

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Revisits (Boehmer)	Mound	36.795111, 44.67748

Site Visit Date:	6/19/2014	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Local Led To Already Known	Along the small, thin, rocky peninsula that forms at the confluence of the Topzawa and Bora Cay Rivers.	Walls on N and S stick out some. Some stones on the E entrance to the mound are visible and may be part of a pavement.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]	Boehmer 1973	0

Survey Pottery Drawing Plate:	Select Site Photos:
	 

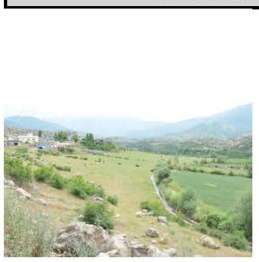
RAP25 – Sidekan Bank

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Sidekan & Eastern Valleys	Unmounded Site	36.804184, 44.662519

Site Visit Date:	6/8/2014	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Construction Road Cut/Construction	Excavated site directly south of the main Sidekan road, in the western outskirts of Sidekan.	Site originally exposed during construction of a bank's foundation. No visible architecture on the surface. Surrounding hillsides had only a few sherds on the surface.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Sasanian		0

Survey Pottery Drawing Plate:	Select Site Photos:
	 

RAP26 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Unmounded Site	36.802001, 44.635967

Site Visit Date:	10/5/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Local Led To Pottery Scatter	Hillside of orchard east of Mudjesir. On the edge of the flat areas to farm and the far steeper slope up the hillside.	From a small area of the sloped part of the orchard, a cluster of very small sherds came out. Some amount of troweling was needed to locate these small sherds. Light troweling in other nearby areas did not reveal any other sherds.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Uncertain - Possible Urartian		14

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP27 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Unmounded Site	36.800932, 44.625748

Site Visit Date:	10/5/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter Road Cut/Construction	Next to the main Mudjesir-Sidekan road. On hillside downslope and north of the road.	A number of sherds on the hillside of varying size. May be stone architecture on the hillslope but can't determine if architecture or natural.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Uncertain - Possible Urartian		10

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 54.1	

RAP28 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Buried Architecture	36.799427, 44.631628

Site Visit Date:	10/5/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Construction Road Cut/Construction	Mudjesir. South of the road, up a small gulley, with a road nearby. Same area as Boehmer's "Upper City."	Buried walls, approximately 50cm below the surface. Large, roughly square hole cut revealed architecture. 4-6 courses of a wall were visible on the southern end of the hole.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Uncertain - Possible Urartian		31

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 54.2	 

RAP29 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Buried Architecture	36.801641, 44.626382

Site Visit Date:	10/5/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter Road Cut/Construction	At the base of hillside around Mudjesir, a large pile of stones and dirt, appearing to come from above. Possible stone in the hillside may be source of the pottery.	The dirt pile containing the pottery does not appear to be from the road on which it lays. May come from the main road's construction, but is newer. "Excavators" on the road apparently caused the pile.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Uncertain - Possible Urartian		8

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 54.3	

RAP30 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Standing Architecture	36.801131, 44.627814

Site Visit Date:	10/5/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	Part of a building located west of the main Mudjesir fields, directly south of the Sidekan River.	2 column bases integrated into a modern building. The two column bases are discussed in Marf's article on his Mudjesir survey.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		0

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP31 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Standing Architecture	36.799226, 44.631636

Site Visit Date:	10/5/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	Nearby RAP 26, an open field near Mudjesir.	Collapsed stone walls, above surface. Likely a late structure. No artifacts recovered.	15 x 15 m

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Ottoman "Modern"		0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP32 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Buried Architecture	36.799760, 44.628872

Site Visit Date:	10/9/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature Pottery Scatter Road Cut/Construction	Next to main Mudjesir road, to the south, in a cut or erosion area.	A number of stones, disturbed and piled by construction or other recent activity. A small exposed section indicated stones originally formed a wall. Recovered piece of slag among the debris.	15 m long

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		21

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 55.7, Plate 55.6, Plate 55.4, Plate 55.2, Plate 55.5, Plate 55.1, Plate 55.3	 

RAP33 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Unmounded Site	36.799745, 44.629008

Site Visit Date:	10/9/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter Road Cut/Construction	Road cut hillside across from the Mudjesir Test trench excavation in the field.	During pottery collection in 2015, rain had revealed portions of what may be vertical walls at this location. Walls were not photographed.	10 m across, 15 m up hill

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		31

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 56.3, Plate 56.4, Plate 56.5, Plate 56.6, Plate 56.2, Plate 56.1, Plate 56.7, Plate 56.9, Plate 56.10, Plate 56.8	

RAP34 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Unmounded Site	36.79976, 44.630014

Site Visit Date:	10/9/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter Road Cut/Construction	Coming down from the hillside from RAP33, a path. Less erosion and architecture than RAP33. Some distance separated from that collection of pottery.	A small path with a handful of pottery. No architectural or notable landscape features nearby.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		1

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 57.1	

RAP35 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Unmounded Site	36.800021, 44.630769

Site Visit Date:	10/9/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Road Cut/Construction Pottery Scatter	Hillside of road cut. Further towards Sidekan versus RAP 32. Just a collection of pottery at base of hill.	Collection of pottery, no architectual features. Relates to RAP32-34.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		22

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 57.4, Plate 57.3, Plate 57.4, Plate 57.5, Plate 57.6	

RAP36 – Mudjesir

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Mudjesir Area	Unmounded Site	36.799311, 44.634027

Site Visit Date:	10/9/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter Road Cut/Construction	A dirt road cut, in a similar area of Mudjesir to the underground building cut by construction.	Large section of the main roadcut hillside. Despite the large area of the road eroding away, only a small area had pottery.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron III		25

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 58.7, Plate 58.1, Plate 58.2, Plate 58.3, Plate 58.4, Plate 58.5, Plate 58.6	

RAP37 – Mudjesir Fort

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Revisits (Boehmer)	Standing Architecture	36.801624, 44.633039

Site Visit Date:	10/9/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Already Known	In the center of the modern Mudjesir village, surrounded by modern homes. Main doorway faces east, towards the main Sidekan-Mudjesir Road.	Large fort structure made of well-hewn stone. Used as a modern building now.	12 x 20 m

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Ottoman	Boehmer 1973	0

Survey Pottery Drawing Plate:	Select Site Photos:

RAP38 – Gund-i Hawdiyan

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Buried Architecture	36.695283, 44.481343

Site Visit Date:	10/11/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Road Cut/Construction	On road cut on road north to Mergasur		~15m long

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Sasanian		10

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 59.3, Plate 59.2, Plate 59.1	

RAP39 – Qalaat Kani Sukkar

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Mergasur		Qalat	36.749654, 44.437076

Site Visit Date:	10/11/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Local Led To	Top of mountain next to village. And point 190 is terrace on side of mountain.		20 m^2

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		6

Survey Pottery Drawing Plate:	Select Site Photos:

RAP40 – Gird-i Dbora

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Mound	36.718471, 44.495022

Site Visit Date:	10/12/2016	Military Occupation?:	✔	Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Already Known	Small hilltop near village. Near confluence of the two rivers heading to Mergasur and Sidekan		3.13 ha

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		18

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 59.4, Plate 59.6, Plate 59.5	

RAP41 -

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran		Unmounded Site	36.736542, 44.50476

Site Visit Date:	10/13/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Local Led To Pottery Scatter	Under village. A tanoor (large, poorly fired pot?), in section/road cut. On hill, hilltop above is beginning on Old Sidekan Road.		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
		20

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 60.2, Plate 60.1	

RAP42 – Gird-i Dew

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Soran	Old Road	Mound Qalat	36.746988, 44.52277

Site Visit Date:	10/14/2016	Military Occupation?:	✔	Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Across from village		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		9

Survey Pottery Drawing Plate:	Select Site Photos:

RAP43 – Gund-i Leremaq

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Old Road	Unmounded Site Field Scatter	36.794665, 44.530774

Site Visit Date:	10/20/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Road Cut/Construction Pottery Scatter	Field on side of mountain of alongside Old Sidekan Road. Above the river. In a small valley that heads down the mountain towards river.	Led to location by local mouktar. Sherds located only in an orchard and a small hole he pointed out. Did not have an opportunity to extensively survey the rest of the area.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
"Islamic"		42

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 61.6, Plate 61.1, Plate 61.3, Plate 61.5, Plate 61.2, Plate 61.4, Plate 61.7, Plate 61.8, Plate 61.9	 

RAP44 – Gund-i Kachi

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Old Road	Field Scatter	36.80763, 44.533992

Site Visit Date:	10/22/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Village between the bend of the river. Ford to get to the village. Large hill at center of village. Pottery found in two fields around the village	Local contact alerted to pottery at the village. Worked with 9 villagers walking around to locate sherds. The largest amount came from large harvested fields with a few trees. Disproportionate amount of orange pottery from an area of very red soil.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		58

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 62.1, Plate 62.2	

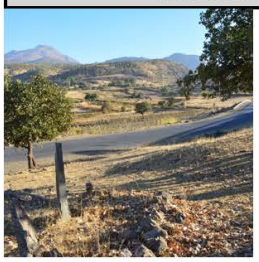
RAP45 – Ghabrestan-i Tawkan

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Unmounded Site	36.770839, 44.605329

Site Visit Date:	10/22/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Road Cut/Construction Local Led To	On New Sidekan road, bend in the road. A modern cemetery. Small hill with good view of the valley heading to the north.	Local mouktar said 15 years ago gravediggers found 2 large pots. What seems to be the large pot is found on the surface in the middle of the graveyard. A small amount of pottery was found up the slope.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron II Iron III		27

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 62.4, Plate 62.3	 

RAP46 – N/A

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Unmounded Site	36.77175, 44.606268

Site Visit Date:	10/22/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Road Cut/Construction Local Led To	Cut from the New Sidekan road to the East of RAP45, no visible architecture.		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		3

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP47 – Qalat Gali Zindan

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Qalat	36.767995, 44.609599

Site Visit Date:	10/22/2016	Military Occupation?:	✔	Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Local Led To	Large stone outcropping that overlooks New Sidekan Road and Melesheen fields to the west. Next to a small village in the east.	Local mouktar said in the past, this was an old village, someone dug a basement and found a "big stone." But they ruined it. Large stones from the old village cover surface. Great viewsheds.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		7

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP48 – Gund-i Melesheen 1

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Field Scatter	36.767304, 44.608145

Site Visit Date:	10/22/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Next to Gali Zindan. Near another of the old roads descending from the southern pass. Easternmost Melesheen field.	Field scatter. A mass of stones in a circle near a tree at side of hill, but may just be stones stacked from field plowing.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Ottoman "Islamic"		23

Survey Pottery Drawing Plate:	Select Site Photos:
	 

RAP49 – Gund-i Shiwan

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Old Road		36.791678, 44.6015981

Site Visit Date:	10/22/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Local Led To	Village at the point Old Sidekan road opens up to Mudjesir/Sidekan/etc valleys.	No archaeological material or featuers at this location. Describes the location of the moutkar's house where he presented us a fibula, originally recovered from the riverbed nearby.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron II		0

Survey Pottery Drawing Plate:	Select Site Photos:
	 

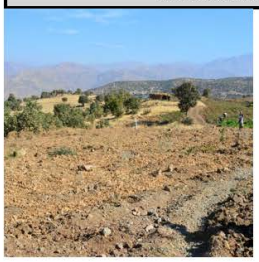
RAP50 – N/A

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Field Scatter	36.773017, 44.612972

Site Visit Date:	10/23/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Ground stone on slope of hill. Pottery found in tomato orchard.	Main interest is a grinding stone, with small amounts of pottery nearby. Hills around had only 1 or 2 sherds. Located on pedestrian survey of the area.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		10

Survey Pottery Drawing Plate:	Select Site Photos:
	 

RAP51 – N/A

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Standing Architecture	36.771781, 44.610436

Site Visit Date:	10/23/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature Pottery Scatter	Hilltop. A large amount of stones, almost certainly natural, along hillside. On top, area that may be architecture. Most of outcropping is natural stones.	Large stone outcropping. Possible structure foundation on top. Pottery around both sides of hill. Most pottery on the western side.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		10

Survey Pottery Drawing Plate:	Select Site Photos:

RAP52 – Ghabrestan-i Baski-Haideri

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Tomb	36.778532, 44.608166

Site Visit Date:	10/23/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Visible Feature	On a hill, next to old road that leads to the pass over Hassan Beg. The old road's path caused erosion cutting between two hills. Overlooks the valley to the south.	Mouktar said someone was digging and found multiple intact pots. The surface shows the roof of a possible tomb at least broken and moved nearby.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		5

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP53 – N/A

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Field Scatter	36.775803, 44.606761

Site Visit Date:	10/23/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Downslope from old road, near Baski Haideri tomb.	Large amount of pottery – most of which was not collected. Can see stones from fields pushed up to field's side.	100 paces across hill, 60 paces downslope

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
"Islamic" Ottoman		115

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 63.1, Plate 63.4, Plate 63.3, Plate 63.2, Plate 63.5, Plate 63.6, Plate 63.8, Plate 63.7	

RAP54 – Serspilla

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Unmounded Site	

Site Visit Date:	10/23/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Did not take GPS, as Abdulwahab collected the pottery. One or 2 hills over from RAP53 to the east.		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		6

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 64.1	

RAP55 – Gund-i Melesheen 2

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Field Scatter	36.766771, 44.606883

Site Visit Date:	10/23/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Melesheen fields, central of the four fields. Along a hillside.	One of four Melesheen fields collected.	.16 hectares

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
Iron II Iron III		22

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 65.2, Plate 65.1, Plate 65.3	

RAP56 – Gund-i Melesheen 3

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Field Scatter	36.766688, 44.606281

Site Visit Date:	Military Occupation?:	Visible Architecture?:
10/23/2016		

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Melesheen fields. Between RAP 55 and 57 on southern hillside of Melesheen.		.67 hectare

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
"Islamic"		60

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 65.5, Plate 65.4, Plate 65.8, Plate 65.5	

RAP57 – Gund-i Melesheen 4

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Field Scatter	36.767039, 44.6057

Site Visit Date:	10/23/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Pottery Scatter	Melesheen fields. Westernmost field.		

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		10

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP58 – Ghaberstan-i Kanisql

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Tomb	36.767424, 44.643051

Site Visit Date:	10/25/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Local Led To	In hills about Kazhak. Village on road first turn off from the New Sidekan road, over mountain. The turnoff passes Tawkan village. 2 tombs, both on hilside. Near old Saddam era road up Kizak Mountain.	Villagers knew of the tomb. Described as an "intact room with big stones." 2 tombs. The first with circular walls and a collapsed roof. The second with a doorway and an intact roof.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		0

Survey Pottery Drawing Plate:	Select Site Photos:
	 

RAP59 – Gund-i Nawchek

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Field Scatter	36.763447, 44.631584

Site Visit Date:	10/25/2016	Military Occupation?:		Visible Architecture?:	

Locating Method:	Site Location:	Description:	Site Size:
Local Led To Pottery Scatter	Downhill from Kazhak village. Next to a stream fed by springs uphill/Hilly field with tomatoes and melons	Most of the pottery comes from a tree near the highest part of the fields. A bulge in the hillside contained most pottery (near the tree). Possible mounding from archaeological remains. Did not record collected pottery.	

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		0

Survey Pottery Drawing Plate:	Select Site Photos:
	

RAP60 – Gund-i Banadoor

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Standing Architecture	36.77703, 44.639888

Site Visit Date:	10/30/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Local Led To	Farther north from Kazhak village. Above fields at the base of the hill/mountain. Spread across a decent distance	Local mouktar said structures are older than he or anyone knows. 7 structures. 2 circular structures like RAP58 which are both inside of large rectangular buildings/structures. They run across the hillside.	Each building ~ 20 x 7 paces

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		0

Survey Pottery Drawing Plate:	Select Site Photos:
Plate 64.2	

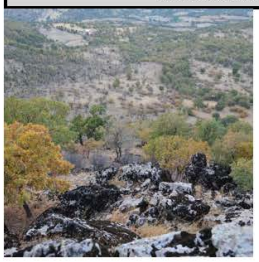
RAP61 – Qalat Bard-i Baraki Seru

Sub-district:	Sidekan Subarea:	Site Type:	Coordinates:
Sidekan	Hawilan Basin	Qalat Standing Architecture	36.779012, 44.641036

Site Visit Date:	10/30/2016	Military Occupation?:		Visible Architecture?:	✔

Locating Method:	Site Location:	Description:	Site Size:
Local Led To	Uphill from RAP60, near the top of Kizak Mountain. Dirt road from Saddam-era occupation passes the site. The name comes from stone outcropping next to the structure.	Stone rectangular walls like RAP60 but no archaeological artifacts located nearby.	12 x 6 paces

Proposed Site Date(s)	Site Bibliography:	Total Sherds, Field Survey:
[Un-datable]		0

Survey Pottery Drawing Plate:	Select Site Photos:
	

B.2: List of Survey Pottery

Plate	Site	Diameter (cm)	Sidekan Typology Type
Plate 52.1	RAP08		
Plate 52.2	RAP08	15	HM 3b
Plate 53.3	RAP23	17	Bowl 11b
Plate 53.1	RAP23	35	Pithoi
Plate 53.2	RAP23	30	Pithoi
Plate 54.1	RAP27		Incised Decorated Body Sherd
Plate 54.2	RAP28		
Plate 54.3	RAP29		Incised Decorated Body Sherd
Plate 55.5	RAP32	15	Bowl 11b
Plate 55.1	RAP32	10	
Plate 55.2	RAP32	10	Bowl 12
Plate 55.7	RAP32	15	
Plate 55.3	RAP32	13	Bowl 7
Plate 55.6	RAP32	15	
Plate 55.4	RAP32	14	Bowl 13
Plate 56.6	RAP33	17	
Plate 56.4	RAP33	15	
Plate 56.2	RAP33	17	
Plate 56.3	RAP33	12	
Plate 56.1	RAP33	25	
Plate 56.5	RAP33	20	
Plate 56.9	RAP33		Incised Decorated Body Sherd
Plate 56.7	RAP33	15	
Plate 56.8	RAP33		HM 2b
Plate 56.10	RAP33	60	HM 3c
Plate 57.1	RAP34	20	
Plate 57.4	RAP35	20	Bowl 1a
Plate 57.5	RAP35		
Plate 57.6	RAP35		
Plate 57.4	RAP35	15	Bowl 1a, Bowl 1b
Plate 57.3	RAP35	15	
Plate 58.6	RAP36	15	Bowl 2b
Plate 58.4	RAP36	15	Jar 1c, Jar 4
Plate 58.1	RAP36	20	HM 2a

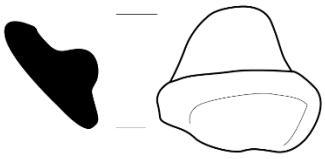
Plate 58.3	RAP36	20
Plate 58.5	RAP36	10
Plate 58.2	RAP36	20
Plate 58.7	RAP36	
Plate 59.1	RAP38	10
Plate 59.3	RAP38	
Plate 59.2	RAP38	
Plate 59.5	RAP40	15
Plate 59.4	RAP40	25
Plate 59.6	RAP40	
Plate 60.1	RAP41	
Plate 60.2	RAP41	
Plate 61.1	RAP43	20
Plate 61.2	RAP43	20
Plate 61.7	RAP43	
Plate 61.8	RAP43	
Plate 61.5	RAP43	13
Plate 61.9	RAP43	
Plate 61.6	RAP43	
Plate 61.3	RAP43	20
Plate 61.4	RAP43	15
Plate 62.2	RAP44	
Plate 62.1	RAP44	30
Plate 62.4	RAP45	55
Plate 62.3	RAP45	
Plate 63.1	RAP53	20
Plate 63.3	RAP53	10
Plate 63.2	RAP53	20
Plate 63.6	RAP53	
Plate 63.5	RAP53	10
Plate 63.4	RAP53	15
Plate 63.8	RAP53	
Plate 63.7	RAP53	
Plate 64.1	RAP54	
Plate 65.3	RAP55	
Plate 65.1	RAP55	40
Plate 65.2	RAP55	30

Plate 65.5	RAP56	
Plate 65.4	RAP56	20
Plate 65.8	RAP56	
Plate 65.5	RAP56	
Plate 64.2	RAP60	

B.3: Survey Pottery Plates

Plate 52 - Site RAP 08 - Mudjesir

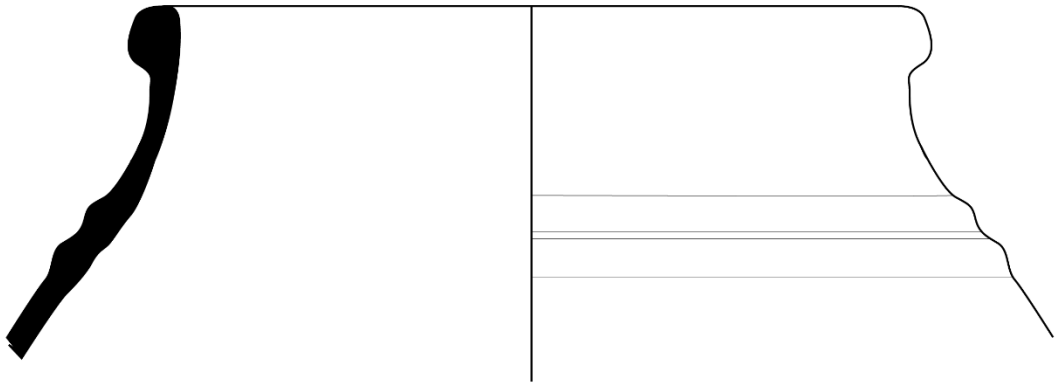
1.



2.

Plate 53 - Site RAP 23 - Gund-i Manga

1.



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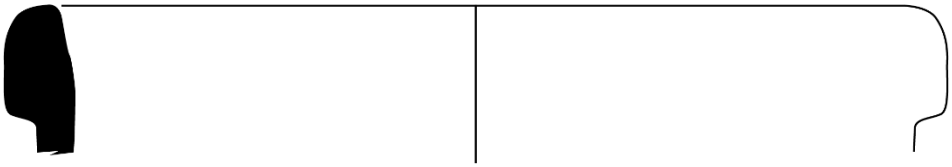

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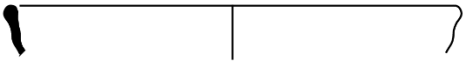


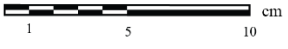
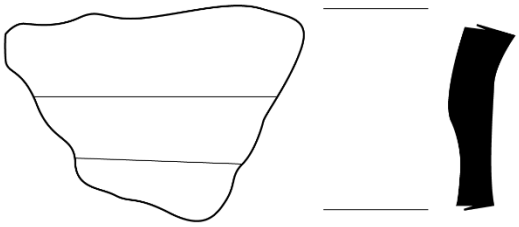


Plate 54 - Site - RAP 27 - Mudjesir

1.



RAP 28 - Mudjesir

2.

No diameter

RAP 29 - Mudjesir

3.

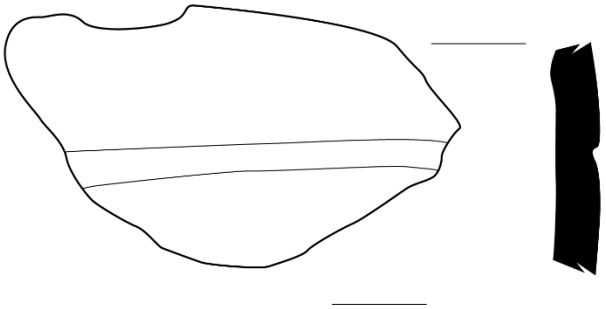


Plate 55 - Site - RAP 32 - Mudjesir

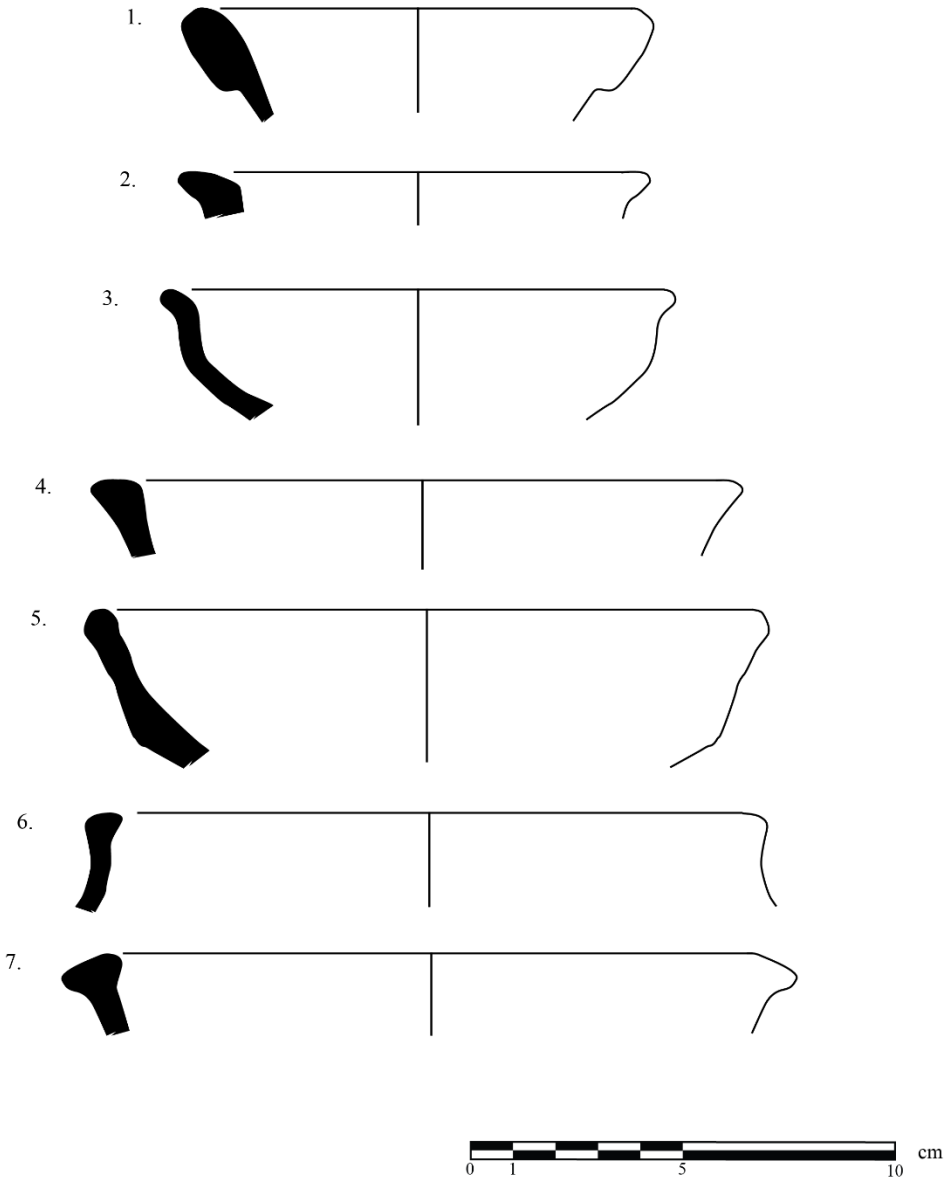


Plate 56 - Site RAP 33 - Mudjesir

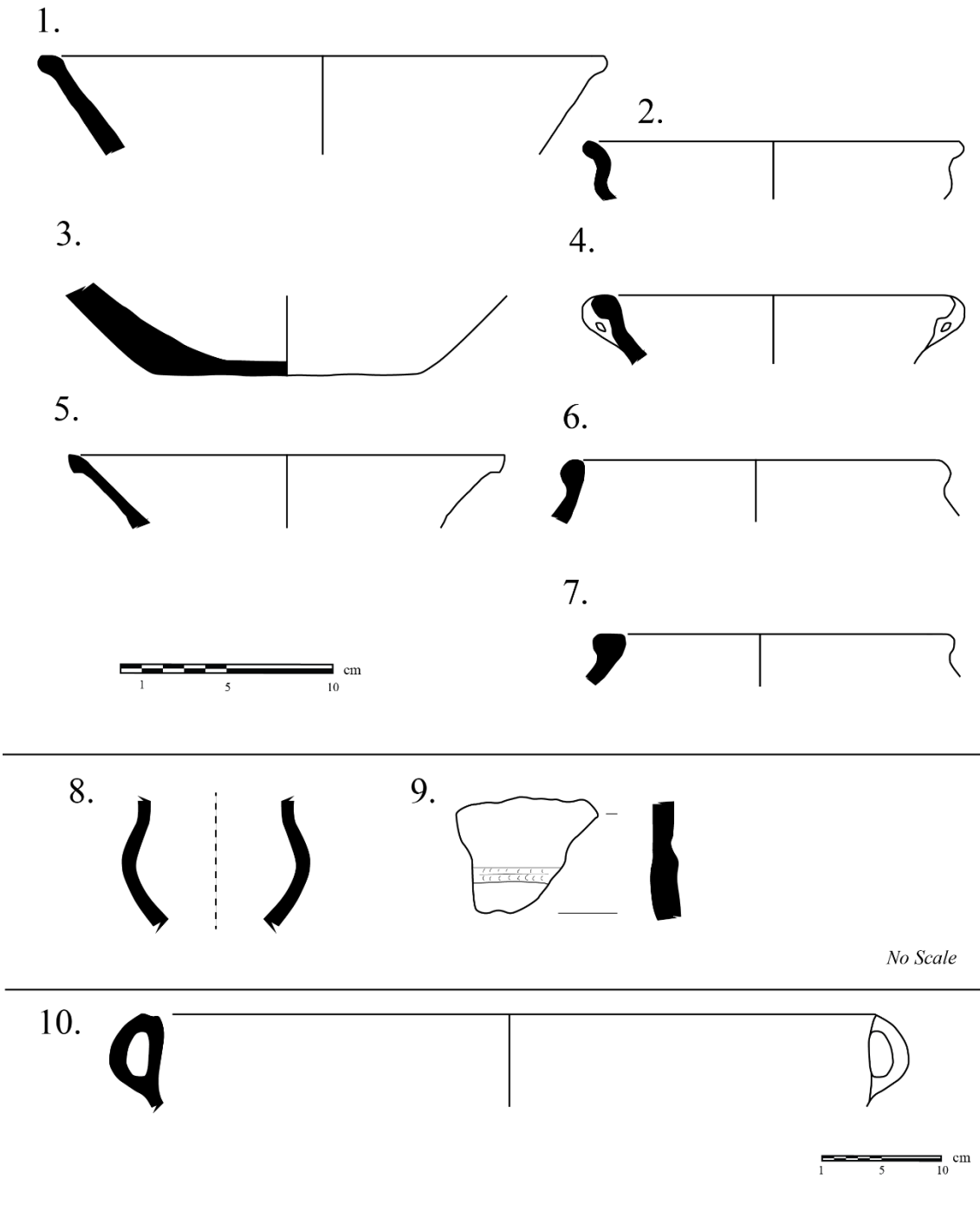
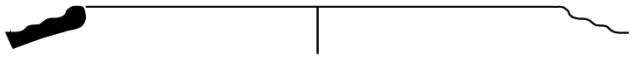


Plate 57 - Site RAP 34 - Mudjesir

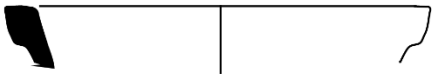
1.



Site RAP 35 - Mudjesir

2.

3.



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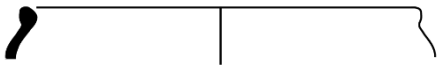

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6.

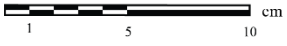
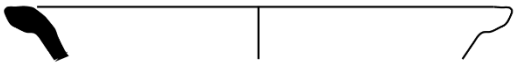


Plate 58 - Site RAP 36 - Mudjesir

1.

2.

3.



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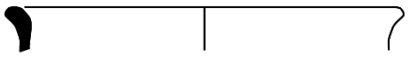
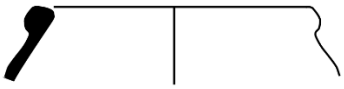


5.



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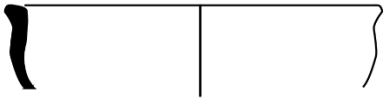

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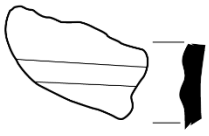
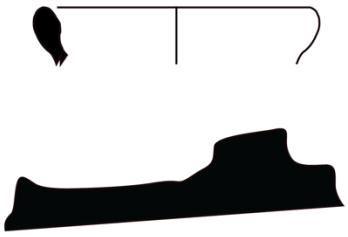


Plate 59 - Site RAP 38 - Gund-i Hawdiyan

1.



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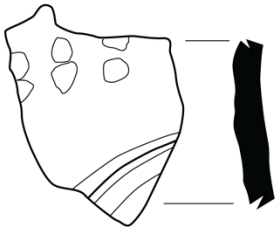
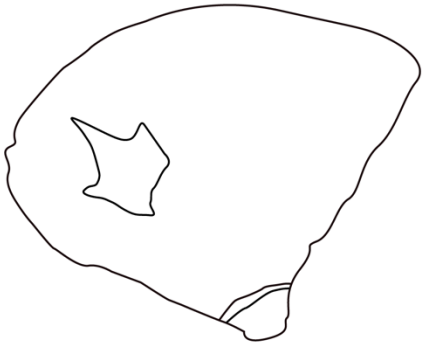
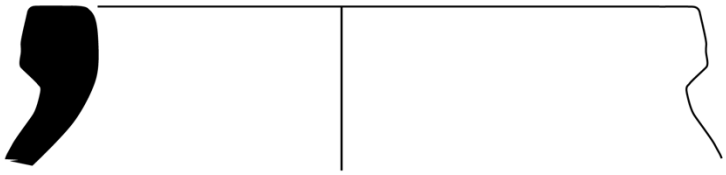


3.



Site RAP 40 - Gird-i Dbora

4.



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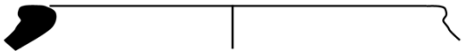
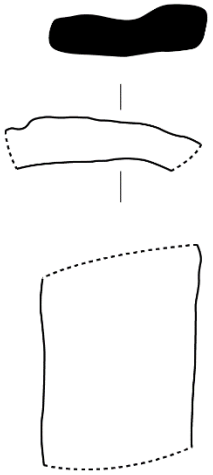


6.

No diameter

Plate 60 - Site RAP 41

1.



2.

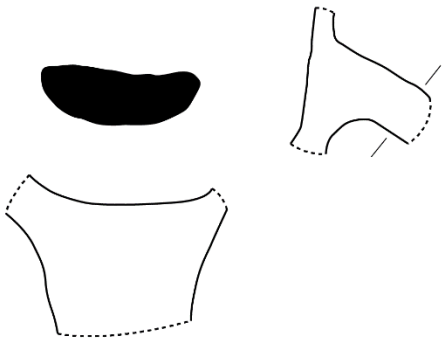


Plate 61 - Site RAP 43

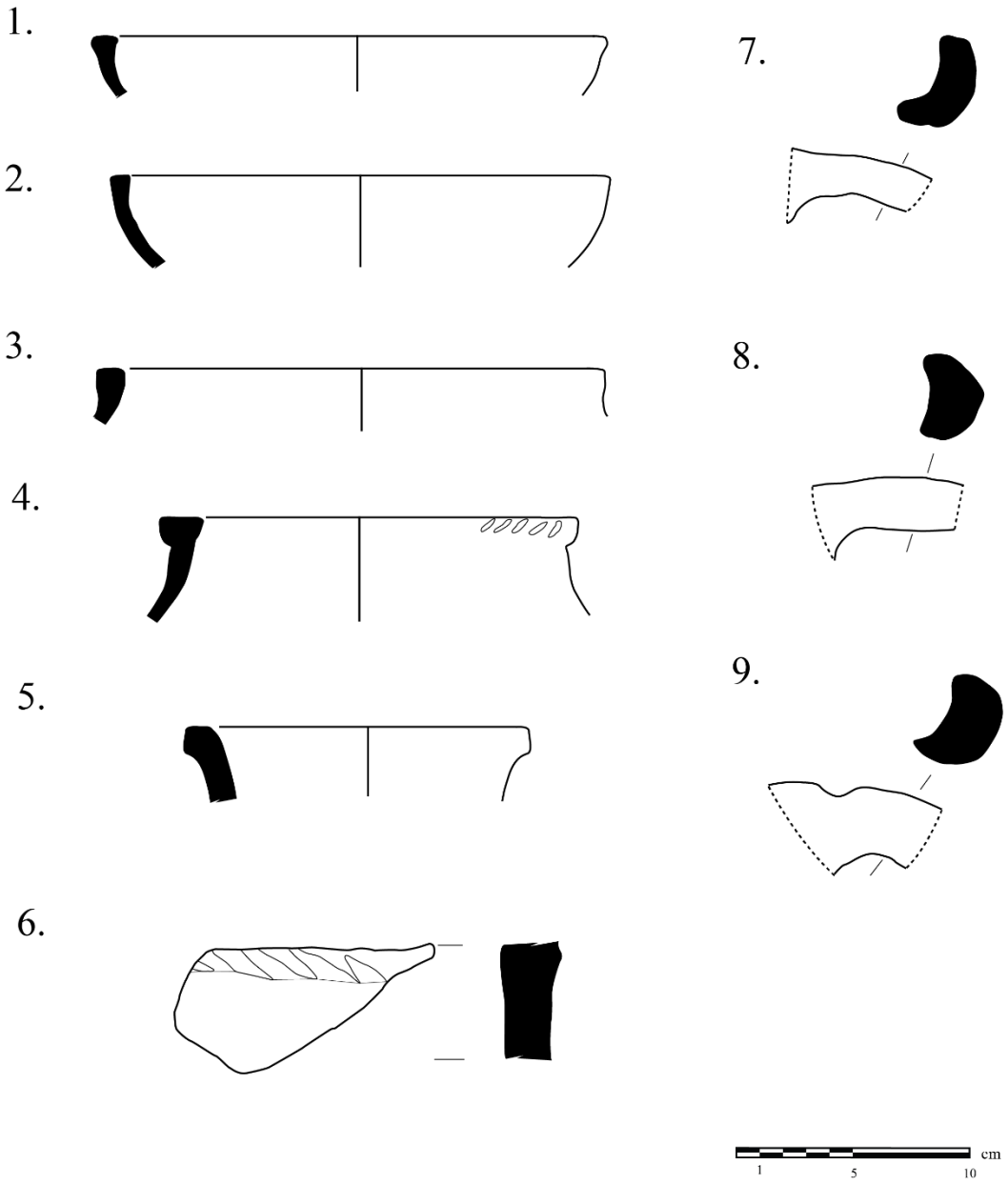


Plate 62 - Site RAP 44

1.

2.

Site RAP 45

3.

4.

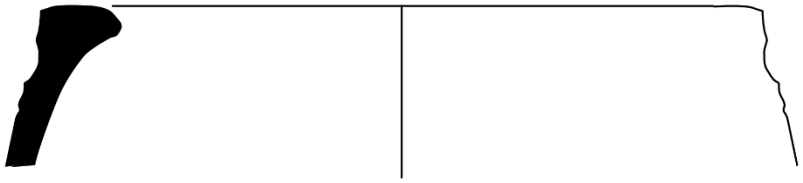


Plate 64 - Site RAP 54 - Serspilla

1.

Site RAP 60 - Gund-i Banadoor

2.

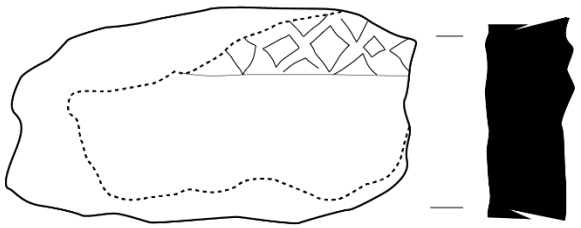
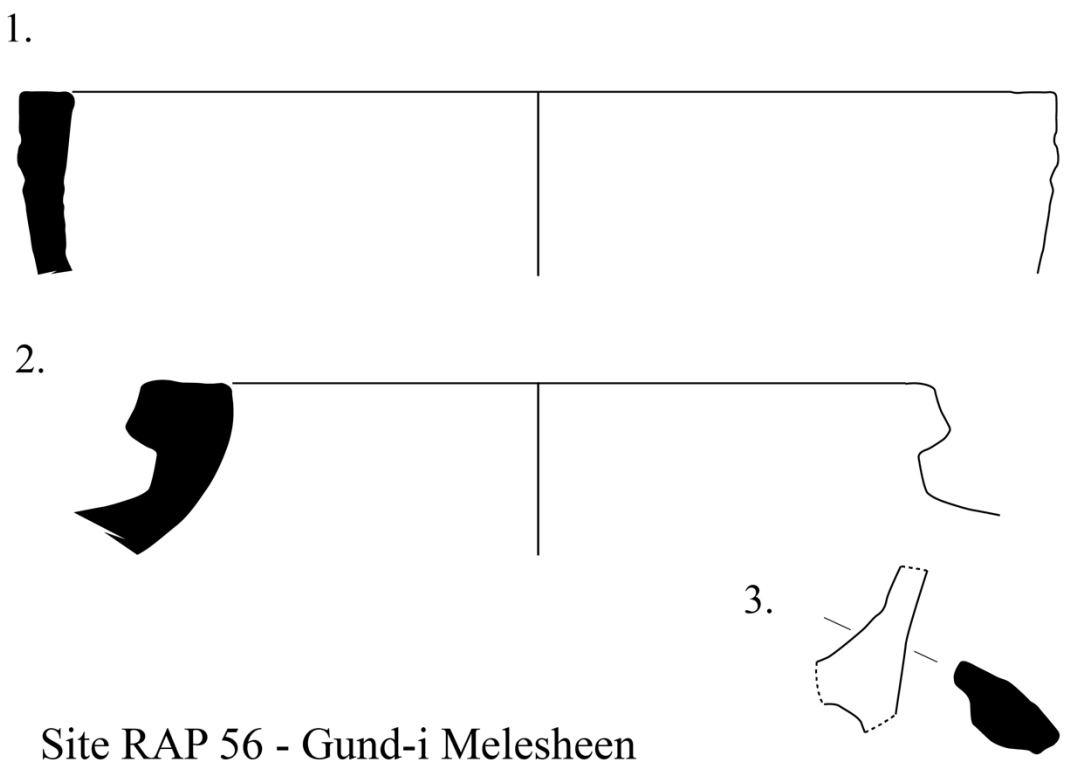
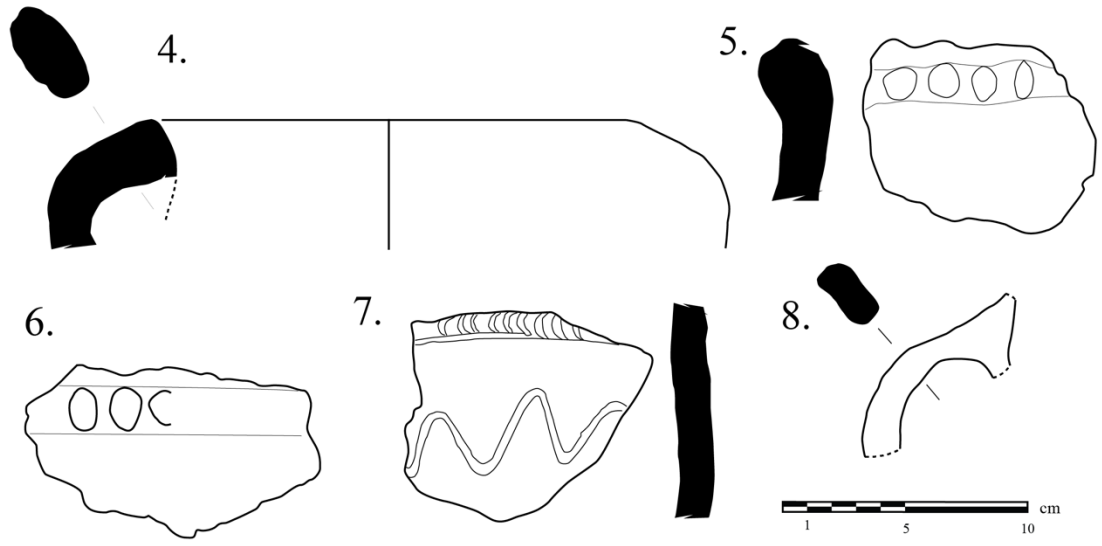


Plate 65 - Site RAP 55 - Gund-i Melesheen



Site RAP 56 - Gund-i Melesheen



Appendix C: Urzana Texts

SAA 1 30

(1) "[..... I have] appointed your [major]-domo in [my] palace."

(2) [Thi]s was the report of Aššur-reṣuwa. [Šulmu]-Bel, the deputy of the Palace Herald came into my presence (with the following report):

(4) "Urzana has written to me: 'The troops of the Urartian king have been defeated on his expedition against the Cimmerians. The governor of Waisi has been killed; we do not have detailed information yet, but as soon as we have it, we will send you a full report.'

(r 3) "[Further: The] cavalrymen [under the command of Šar]ru-lu-dari have disappeared and are on the run in Urarṭu. [The sc]outs of the household of the Palace Herald [operating in the t]erritory of Hubuškia [.....] have caught [..... the city of] Birate [....."

(Rest destroyed)

SAA 5 89

(1) To [the ki]ng, [my lord]: your servant [Aššur-
reṣuwa]. Good health t[o the king, my lord]!

(4) They are building a fort [in ...] because of Kaqq[adanu], the governor.

(7) [He has seized] Urzana, [the king] of Muṣaṣi[r], ga[thered] his people, and taken them] to Waisi.

(11) Arizâ is on his way to [NN]. Ar[iye ...]

SAA 5 112

(1) [B]efore [him, Kaq]qa[danu had en]tered Wai[si] in Tishri (VII); the king entered the city [af]ter him.

(6) I have [not y]et heard what happened to[tho]se men, [wheth]er they [have] been killed [or] deported.

(r3) [A mess]enger of Urzana, [king of
Mu]ṣaṣir, [and a messenger of] Arizâ have[c]ome [to me]

(Rest destroyed)

SAA 5 130

(Beginning destroyed)

(1) We did not disclo[se .....].

(2) He is bringing all the [...] of the country [.....], saying: "[Let us
grasp] the feet of the k[ing of...]; otherwise, [we should ...] t[o .....] 200 soldiers."

(7) [He has ...] to the king, [my] lord, [...]: "You [.....]."

(9) What(ever) he tells us [...].

(10) On the 2nd day [... fr]om m[y]presence [.....]

(Break)

(r 1) [they w]ent [away ...]

(r 2) pla[ced ...]

(r 4) [I wrote to] Saniye: "What order did he g[ive him? I must
write] to the king, m[y] lord.""

(r 7) He (responded): "Urzana [has
left] the to[wn ...]; if thepal[ace] herald, [my lord, orders], a messenger [.....]

(Break)

(e.1) [Now th]en I am sending [t]o the king, my lord, the
messenger of mine who [.....]; the kin[g, my lord, may a]sk him.

SAA 5 136

(1) To the king, my lord: your servant Šulmu-beli. Good health to the king, [my] lord!

(4) Urzana is staying in Alamu on the 10th; onthe [11th] he will be in Hiptuna, [on the 12th] in Muši, [on the 13th] in Issete, [on the 14th in Arbe]la.

(Break)

(r2) We have se[nt ...] 56 horses, [x oxe]n, and
2,000 sh[eep]; 100 [...], the audience gift, [...].

(r7) Let the king, [my] lo[rd, decide] what his[orders are] and write [me].

SAA 5 144

(1) [To the king, my lord: your servant NN]. Go[od health to the king, my lord]!

(4) [The land of the king] is well (and) the f[orts] are well.

(7) As to the news o[f the Urarṭian] about which theking, my lord, wr[ote me]:
""[Send me] a deta[iled] report!"" —

(9) the Cimme[rian(s) .....]

(Break)

(r 2) [...] of Ar[a ...]

(r 3) [...] were received [...]

(r 4) ..... [...]

(r5) The Cimmerian (king) has [...ed] on it and pitched
[his camp] in Uṣunali; [I do not have a full] report(yet). [...] with the Hubušk[ian].

(r 10) I have written to Urzana: ""Send a detailed repo[rt on ...]""

(Break)

(e. 1) I have not [yet] heard [.....].

(e. 2) Let them write me [what the king my lord's orders are].

SAA 5 145

(1) To the Palace Herald, my lord: your servant Urda-Sin.

(4) The Cimmerian (king) has departed from
Mannea this [...] and entered Urarṭu. He is... [in] Hu'diadae; Sarduri is [...] in Ṭur[u]špâ.

(14) The messenger of the governor of Wais[i]has gone to Ur[za]na for [help], saying:
"Let yo[ur] troops come to (aid) the people of Pulia and Suriana."

(r6) All of Urarṭu is extremely frightened. They are assembling troops, saying:
"Perhaps we can attack him, once there is more snow."

(r15) As to this booty which they said he has taken, they do say that of the district of Arhi, [...].....

SAA 5 146

(1) [T]o the king, my lord: your servant Urzana. Good health to the king, my lord!

(4) The king, my lord, knows my affair. Whe[re] are the oxen and the rams?

(7) Snow has blocked the roads. (As) I am looking out now, it is impossible: I cannot go empty-handed to the presence of the ki[ng].

(11) Or (suppose) I went and had to return from [...: I might ... and die in] the enemy country.

(15) My heart [is ...], humble [...], reaching[...].

(18) As to what the king, [my] lord, [wrote me]:

(19) "2[.....]

(20) 400 [.....]

(21) [.....]

(22) t[o .....]

(23) the king [.....]

(r 1) [.....]

(r 2) which I [.....]

(r 3) [bring]s light [.....]

(r 4) wher[e .....]

(r 5) came [.....]

(r6) May Aššur, B[el, Nabû], and Ištar, theLady [of Battle and Fight], vanquish yourenem ies and fo[es], put [your ...] under[your f]eet, and make [your] ru[le]bene[ficial] for a[ll] t he countries.

SAA 5 147

(1) A [tab]let of Urzana to the pa[lace] herald. Good health to y[ou]!

(4) As to [wh]at you wrote me: "Is the king of Urarṭu on his way (there) with assembled troops? Where is he staying?" —

(9) the governor of Waisi and the governor next to the Ukkean have come and are doing service in the temple. They say:

13) "The king is on his way; he is staying in Waisi, and further governors are coming to Muṣaṣir to do the service."

(r 3) As to what you wrote me: "Nobody may take part in the service without the king's permission" —

(r8) when the king of Assyria came here, could I hold him back? He did what he did. So how could I hold back this one!

SAA 5 148

(1) [To the king, my lord: your servant NN]. Good health [to the king, my lord]! May Aššur, Bel, and [Nabû] giv[e you length of days]!

(5) [... is] in Muṣ[aṣir]; [the rest of] the governors [.....].

(8) As to the news of the Urarṭ[ian], the brother of Urzan[a] has c[ome t]o Šulmu-beli, [saying]: "He has returned [...]"

(Break)

(r 2) I shall set it up [in the ...] of the [...] palace.

(r3) I am in the city of [...], working on the [...]. The ki[ng, my lord], can be glad.

Appendix D: Table of Muṣaṣir Related Dates

Date (Range)	Event	Chapter, Section	Archaeological or Historical?
1365-1330 BCE	Aššur-uballiṭ I, subduer of Muṣru	2, Musasir	Historical
1274-1245 BCE	Shalmaneser I subdues Muṣri land and Arinu city	2, Musasir	Historical
1261-1055 BCE	Gund-i Topzawa 1 East, radiocarbon date	4, GT	Archaeological
1250 BCE	Kidin-Ḫaldi and Ṣilli-Ḫaldi, Assyrians with Haldi theophoric	7, Origins	Historical
1114-1076 BCE	Tiglath-pileser I battles Muṣri	2, Musasir	Historical
1191-903 BCE	Gund-i Topzawa 1 East, radiocarbon date	4, GT	Archaeological
934-912 BCE	Aššur-dan II attacks Muṣri	2, Musasir	Historical
996-814 BCE	Gund-i Topzawa East, radiocarbon date	4, GT	Archaeological
895-833 BCE	Mudjesir excavation drain, radiocarbon date	5, Mudjesir	Archaeological
895-797 BCE	Qalat Mudjesir excavation, radiocarbon date	(Unpublished - QM)	Archaeological
883-859 BCE	Aššurnasirpal II Banquet Stele with Muṣaṣiru envoy	2, Musasir	Historical
858 BCE	Shalmaneser III captures the city Aridu	2, Musasir	Historical
827 BCE	Shalmaneser III's general Dayyan-Aššur destroys Zapparia, fortified city of Muṣaṣir	2, Musasir	Historical

820-810 BCE	Išpuini and Minua's journey to Muṣaṣir in the Kelishin Stele	2, Musasir	Historical
790-740 BCE	Gund-i Topzawa 1 West, radiocarbon date	4, GT	Archaeological
767 BCE	Etiuni, an enemy of Urartu, tries to attack Ardini [Muṣaṣir]	2, Musasir	Historical
714 BCE	Sargon II's Eighth Campaign	2, Musasir	Historical
713 BCE	Rusa's journey to Muṣaṣir in the Topzawa Stele	2, Musasir	Historical
669-631 BCE	Haldi-aplu-iddina, Haldi-da"inanni, Assyrians with the Haldi theophoric	2, Musasir	Historical
600-500 BCE	Ghaberstan-i Topzawa, radiocarbon date	4, Ghaberstan-i Topzawa	Archaeological
522-486 BCE	Arka, Son of Ḫaldita, on the Behsitun inscription	2, Post-Assyria	Historical

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