

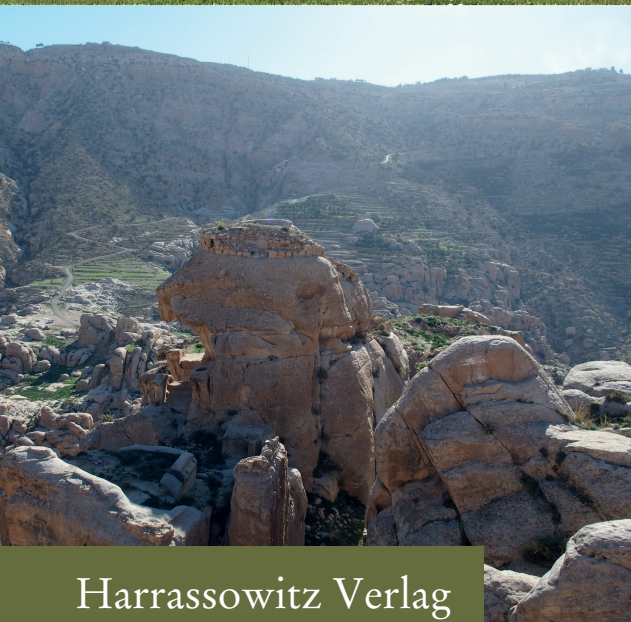


Studia Chaburensia | Vol. 8

**The Reach of the Assyrian
and Babylonian Empires**

Case Studies in Eastern and Western Peripheries

Edited by Shuichi Hasegawa and Karen Radner



Harrassowitz Verlag

Studia Chaburensia

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Cover illustration:

Above: View from the Peshdar Plain north of Qaladze towards the Qandil mountains of the Zagros range (Kurdish Autonomous Region of Iraq, April 2019). Photo by Andrea Squitieri.

Below left: View of Qalat as-Sela (Jordan, October 2018). © Sela Archaeological Project, courtesy Rocío Da Riva.

Below right: View of Tel Rekhesh with Mount Tabor rising up in the background (Israel, August 2008). © The Tel Rekhesh Project.

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Preface

Promoting Northern Mesopotamian studies of all periods, but with a focus on Assyria, is the aim of the book series *Studia Chaburensia*. Extending as far as Anatolia, Iran, and Egypt, the Assyrian Empire encompassed the entire Ancient Near East. Politically and militarily unrivalled it hegemonized the ancient world of the 7th century BC. Studying Assyrian history and culture therefore always implies the necessity of going beyond one's own nose to incorporate both local and regional aspects. A second significant feature of this empire is its long history of state formation under a single royal dynasty that continued for more than one thousand years and – in archaeological terms – over three cultural periods: the Middle and Late Bronze Ages, and the Iron Age. This long period also included the major material and socio-economic transition from bronze to iron.

Beginning in the 19th century, research on Assyria focused for more than a hundred years on the reading and understanding of the vast corpus of inscriptions, and on the interpretation of the archaeological context of their provenance, i.e. the Assyrian capital cities with their relief-decorated palaces and temples. However, the excavation of Assyrian provincial centers, villages, and even hamlets in the “home provinces” and in the Assyrian-dominated realm from the Levant to the Zagros Mountains during the last half-century has changed the general view of Assyrian history and culture. It is now possible to untangle the varieties of hegemony, administration, and material culture against a backdrop of different ethnic groups, regional cultural traditions, and languages.

This volume, edited by Shuichi Hasegawa and Karen Radner, is thus very welcome. Bridging the geographical extension of the Assyrian Empire, and addressing its still poorly-understood “continuity” with the short-lived Babylonian Empire, it offers an impressive collection of regional and methodical studies that employ a range of modern approaches to Assyrian and also Babylonian imperial history and culture. Furthermore it is a milestone for the series *Studia Chaburensia* as it is the first volume to be published in hybrid format, as a print publication and a digital Open Access publication, made possible thanks to the generous financial support provided by the Alexander von Humboldt Foundation through the establishment of the Alexander von Humboldt Professorship for Ancient History of the Near and Middle East for Karen Radner at LMU Munich in 2015.

Hartmut Kühne
Berlin, August 2020

Towards an understanding of the Assyrian Empire's defence strategies in the east

A case study from the Peshdar Plain (Dinka Settlement Complex and Gawr Miran)

1. Introduction

This chapter presents the results of the investigations conducted by the Peshdar Plain Project¹ at the sites of the Dinka Settlement Complex and Gawr Miran, both lying in the Peshdar Plain in the Sulaymaniyah region of Iraqi Kurdistan (Fig. 1). These two sites were chosen for a case study exploring the strategies of defence and territorial control implemented by the Assyrians after they had incorporated the Peshdar Plain into their Empire in the late 9th century BCE. By this time, the Peshdar Plain had become part of the north-eastern border province of the Palace Herald,² one of four dedicated defensive zones of the Empire.³

The area was directly connected, via a number of inner provinces, with the Assyrian heartland, down the Lower Zab where it merged with the Tigris just south of the city of Assur, which was the core of the Empire. In their official inscriptions but also in the letters exchanged with their state officials, the Assyrian kings discussed aspects pertinent to the control and protection of the Empire's borders, and in particular the building and maintenance of "chains" of fortresses emerges from these textual sources.⁴ At a first glance, references to chains of fortresses in the texts might suggest a parallel to the Roman *limes*, with its line of fortifications that bounded the Roman Empire along the Rhine and the Danube, or along the

1 The Peshdar Plain Project (PPP) was inaugurated in 2015 and is directed by Prof. Dr Karen Radner (LMU Munich) and, since 2018, also Prof. Dr F. Janoscha Kreppner (WWU Münster), with the present author serving as deputy field director and, since 2018, field director. PPP is conducted under the auspices of the Directorate of Antiquities of Sulaymaniyah, headed by Kamal Rasheed Raheem, with the support of the General Directorate of Antiquities of the Kurdish Autonomous Region of Iraq, currently directed by Kaifi Mustafa Ali, and of the Raparin Directorate of Antiquities headed by Barzan Baiz Ismail, and with the authorisation of the State Board of Antiquities and Heritage of Iraq, directed by Qais Hussein Rasheed. The results discussed in this chapter were obtained through work principally funded by the Alexander von Humboldt Foundation through the establishment of the Alexander von Humboldt Professorship for Ancient History of the Near and Middle East for Karen Radner at LMU Munich in 2015. Additional funding for the excavations on Qalat-i Dinka was awarded to the present author by LMU excellent Nachwuchsförderungsfonds (2017) and by the Gerda Henkel Foundation (Project Grant AZ 09/V/18). Thanks are due to Karen Radner for suggesting the topic of this paper as a subject for research and to Denise Bolton (LMU Munich) for her careful editing of the language of this paper.

2 Radner 2016b.

3 Liverani 2004; Radner 2006: 48-49.

4 E.g., Parker 1997.

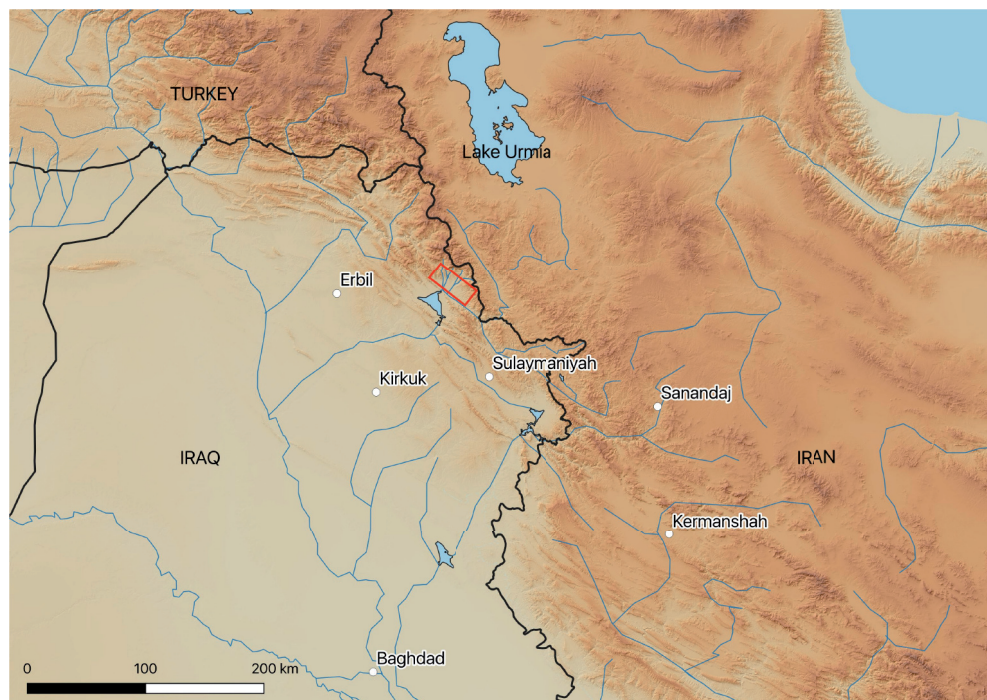


Fig. 1: Map of northern Iraq and western Iran with the location of the Peshdar Plain indicated by the red box.

Euphrates.⁵ Recent archaeological fieldwork in the Peshdar Plain on the Lower Zab offers the opportunity to cast light on what the Assyrians had in mind when they discussed their defensive strategies on the ground.

In this paper, I will first introduce the geographic and geopolitical setting of the Peshdar Plain. I will then describe the results of the archaeological and geophysical investigations carried out at the Dinka Settlement Complex and Gawr Miran; finally, I will focus on the spatial dimensions of both sites in connection with other known Assyrian sites in the surrounding area through a visibility analysis. Based on these results, I will draw some conclusions about the imperial defence strategies as seen from the perspective of a network rather than a *limes*.

2. The geography of the Peshdar Plain and its geopolitical setting of the Iron Age

The Peshdar Plain has an arch-like shape that extends across approximately 1,400 km² in the Sulaymaniyah province of Iraqi Kurdistan (Fig. 2). It is bordered by the Zagros *chaîne magistrale* to the east, where the border with Iran runs, and by the mountain ranges of Khu-i Resh and Kurkur Dagh to the west. It is crossed by the Lower Zab river and its tributaries; the Zab breaks through the Khu-i Resh and Kurkur Dagh via the Darband-i Ranya pass to flow into the artificial Lake Dokan, which today occupies most of the Ranya Plain

5 See, e.g., Breeze et al. 2005.

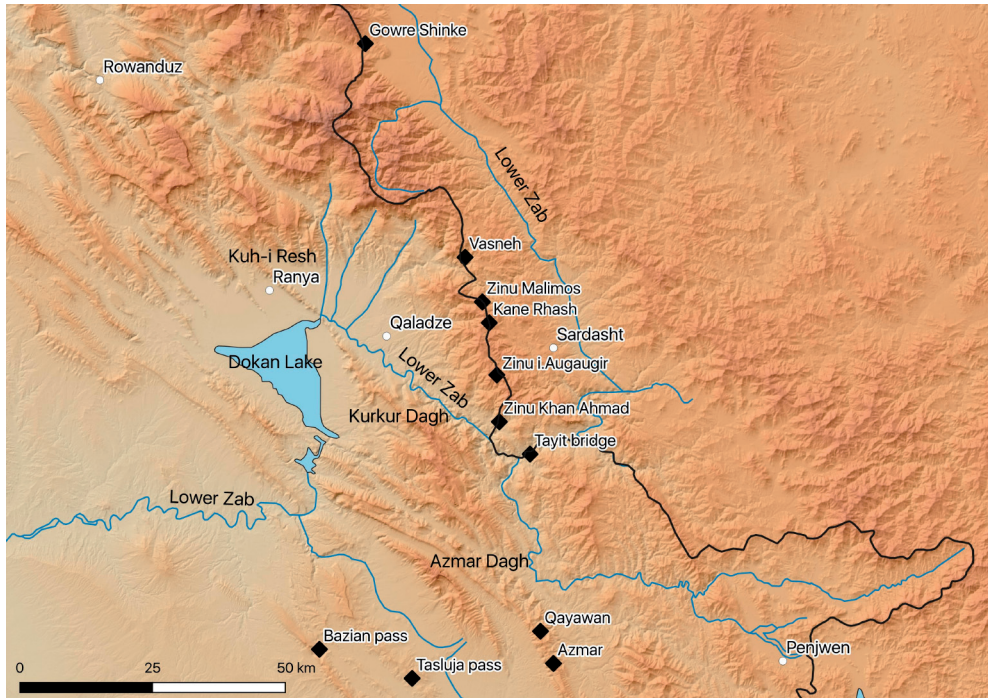


Fig. 2: Map of the area surrounding the Peshdar Plain showing the main mountain passes and mountain ranges (adapted from Levine 1973: figs. 1-2). The black line is the Iraq-Iran border.

that extends to the west of the Peshdar Plain. The highest area of the Peshdar Plain measures about 700 m asl, increasing steeply towards the Zagros mountains.⁶ At one of its lowest levels, the Bora Plain, a sub-unit of the Peshdar Plain, extends by about 7 km², and this is where the Dinka Settlement Complex lies. Several passes through the Zagros *chaîne magistrale* connect the Peshdar Plain to the Iranian side of the Zagros, where the Sardasht Plain lies (Fig. 2). Control over these passes has always had a strategic role in the geopolitics of the area, as is also demonstrated by the accounts of C.J. Edmonds, a British official who served in Sulaymaniyah between 1919 and 1925 at the time of the British Mandate of Iraq.⁷

The Lower Zab is a key communication path connecting both versants of the Zagros. This river originates in northwestern Iran, in the Piranshahr County; it flows southwards roughly in parallel to the Zagros chain until south of the Sardasht Plain where it makes an abrupt change of direction that leads it westwards until it ultimately crosses the border into Iran at the Tayit bridge. Here it continues its course towards northwest, bordering the Peshdar Plain to the south, and, as mentioned above, flowing into Lake Dokan via the Darband-i Ranya pass. The river exits the lake by the city of Dokan, resuming its course in a west-southwesterly direction for about 170 km before adjoining the Tigris river near the town of Al-Zab, about 30 km south of Qalat Shirqat, where the Assyrian capital city of Assur was located.

6 Eckmeier et al. 2018.

7 Edmonds 1957.

Much like it links (rather than separates) two modern states today, the Lower Zab once connected the territories of several bordering Iron Age polities to the core region of the Assyrian Empire. These polities are particularly known from Assyrian texts of the second half of the 9th century BCE onwards. On the eastern side of the Zagros, the Mannaeans controlled the area south of Lake Urmia up to the area of modern Sanandaj, in the Iranian Kurdistan province, where the Assyrian province of Parsua was located.⁸ The site of Qalaichi was likely one of the Mannean centres.⁹ North of Mannea, the powerful state of Urartu exerted its control over northwestern Iran and eastern Anatolia, frequently threatening Assyrian interests; whereas to the east and south-east of Mannea the many small polities of the Medes (whose later capital city Ecbatana was located near modern Hamedan) controlled a vast portion of the central Iranian plateau. As Urartu became a dominant political and military force after the second half of the 9th century BCE, the Assyrians shifted their attention to western Iran, developing commercial and military relationships with the Medes and the other Iranian kingdoms.¹⁰ The Assyrians were particularly interested in the trade route known as the Great Khorasan Road which connected the Iranian Plateau to Mesopotamia. They were particularly interested in obtaining horses from these areas, as these animals were an essential component of their military force.¹¹ Another Iron Age kingdom that paid tribute to the Assyrian Empire was Ҳубуškia, which Lanfranchi and Radner locate in the plain of Sardasht, on the opposite side of the Zagros from the Peshdar Plain.¹² On the western side of the Zagros, north of the Peshdar Plain, the kingdom of Muṣaṣir was located in the plain where the modern city of Rowanduz now lies;¹³ this kingdom also became a tributary state to the Assyrian Empire, creating a sort-of buffer zone between the latter and Urartu further north. South of Muṣaṣir, the territories of the Peshdar and Rania Plains, as mentioned above, became part of the Palace Herald province in the late 9th century BCE.¹⁴ South of this province, the territories of Mazamua extended around the modern Shahrizor plain, which became an Assyrian province in the 9th century BCE. This province represented the preferred Assyrian access route into the Zagros through the passes of Bazian and Tasluja, the “passes of Babite” for the Assyrians.¹⁵

The Peshdar Plain and its surrounding regions included a mosaic of states, tributary states, and Assyrian provincial areas interconnected with each other both via the Lower Zab and several mountain passes, whose control was strategic to the Empire to manage the movement of people, armies and goods, especially tributes. The course of the Lower Zab, leading directly to the imperial core area, made the Peshdar Plain a strategic zone for defending the Empire against potential threats from the east. In addition to the river and the Zagros mountain passes, the land routes crossing the plain were equally important from a strategic point of view. Based on the letters from the state correspondence of Sargon II (721–705 BCE),¹⁶ Karen Radner reconstructed the ancient route connecting the kingdom of Muṣaṣir to the Ranya Plain (Fig. 3); this route continued into the Peshdar Plain, with one

8 Radner 2013.

9 Hassanzadeh and Mollasalehi 2011.

10 Radner 2013.

11 Radner 2003: 38–43.

12 Lanfranchi 1995; Radner 2016b.

13 Radner 2012; Danti 2014.

14 Radner 2016b.

15 Discussed by Levine 1973; Altaweel et al. 2012: 42.

16 Lanfranchi and Parpola 1990; Lanfranchi 1995.

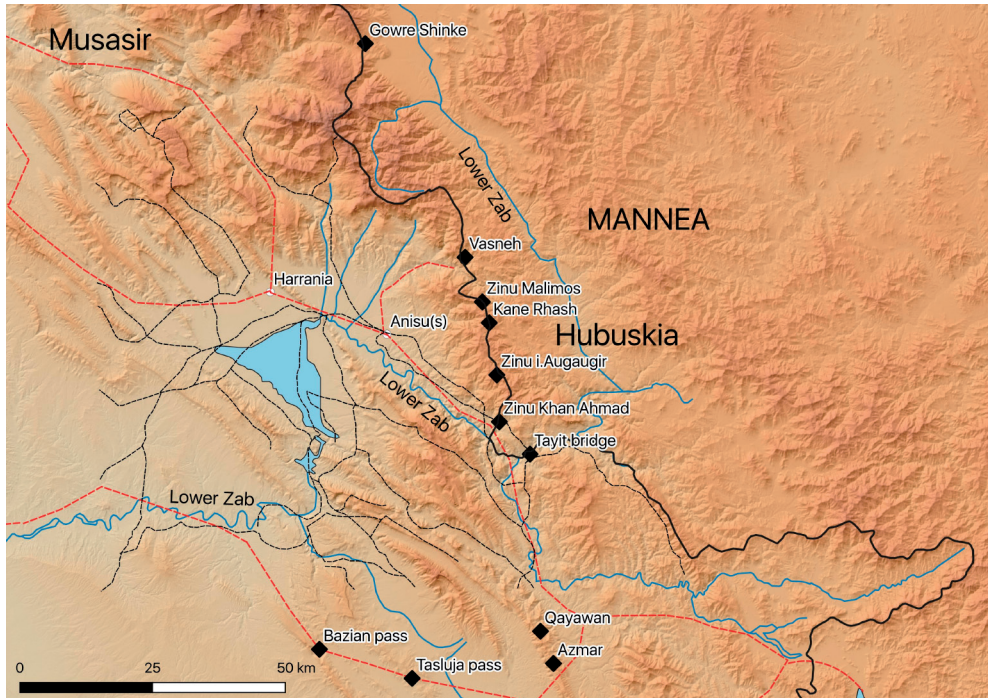


Fig. 3: Map of the area surrounding the Peshdar Plain. Black dashed lines: the main caravan routes as reported in Edmonds 1957: map; red dashed lines: routes reported in Sargon II's letters mentioned in the text according to Radner 2016b: fig. B1.4; the main mountain passes according to Levine 1973: figs. 1-2. For the locations of Mannea, Muşasir and Hūbuškia, see Radner 2016b.

branch moving to the east towards Hūbuškia, and another to the south, towards Mazamua, following a direction roughly parallel to the course of the Lower Zab.¹⁷ This route crossed the ancient cities of Hārrania and Anisu, identified respectively with the modern towns of Ranya and Qaladze.¹⁸ Today, Qaladze is the main population centre of the Peshdar Plain, and a large tell rises there which may enclose the remains of ancient Anisu.¹⁹ To the south, this route connected to one described in detail in the so-called “Mazamua Itinerary.”²⁰ This second route crossed the lower regions of the Lower Zab towards the Shahrizor Plain passing through the Bazian and Tasluja passes, thus traversing the Assyrian provinces of Arzuḫina and Mazamua.²¹ In addition to the routes recorded in the texts from the time of Sargon II, additional paths existed that linked the Peshdar Plain with the surrounding regions, as evidenced by the caravan routes reported by C.J. Edmonds. Some caravan routes followed the course of the Lower Zab to the north (like the routes emerging from Sargon II's correspondence), others took a southerly direction, crossing the Kurkur Dagħ and the Azmar Dagħ to the south of

17 Radner 2016b: 17-21 with fig. B1.4.

18 Lanfranchi 1995.

19 Radner 2016a: 11, 13 fig. A1.3.

20 Levine 1989.

21 Radner 2016b: 20 fig. B1.4.

the Lower Zab (roughly as the modern motorways do). To the north, some connected the Peshdar Plain to the Ranya Plain through the Darband-i Ranya, as the river does, moving in a southwestern direction; others moved north from the Peshdar Plain through the Kuh-i Resh (similar to the northern route reconstructed from Sargon II's letters; Fig. 3).

In conclusion, despite the rugged mountain landscape that characterised this area, several communication paths linked the imperial provinces to their neighbouring states to both the west and east of the Zagros. Such routes must have been established long before the Assyrian conquests, as shown by the Iron Age, pre-Assyrian, pottery tradition of the Peshdar Plain which has several links to the sites located east of the Zagros (e.g., Hasanlu and Dinkha Tepe).²² Once the Assyrian province of the Palace Herald had been established, control over these paths became essential both to defend the region from potential enemies, and ensure the regular supply of tribute. The question arises, then, as to how the imperial strategies to control and defend this area of the Zagros materialised, from an archaeological point of view.

3. The Dinka Settlement Complex, its lower town and the *qanat* system

The Dinka Settlement Complex (DSC) lies in the Bora Plain, a subunit of the Peshdar Plain, which extends to approximately 7 km². The Bora Plain is bordered to the west by a crescent-shaped range of hills and to the south by the course of the Lower Zab river (Fig. 4). The settlement extends over about 60 ha, judging by the pottery spread observed during the pottery survey,²³ and it is composed of a lower town and a citadel. The latter is situated on Qalat-i Dinka, a partially natural and partially artificial mound situated at the southern end of the crescent-shape hill range.

In the lower town, the Peshdar Plain Project has conducted investigations since 2015, with a combination of geophysics, coring, and excavation. These have revealed a densely built area, which encompasses a low mound called Gird-i Bazar.²⁴ In 2013 a chicken farm was built on this mound, destroying half of the site (Fig. 4). The magnetic survey highlighted the possible limits of the built area to the north, east and south, as well as the presence of an ancient wadi that once crossed the settlement roughly through the middle. Its existence has been confirmed by both a hydrologic analysis and the excavation of three geoarchaeological trenches which brought to light the ancient wadi bed.²⁵ At Gird-i Bazar, the archaeological excavations, undertaken between 2015 and 2018, unearthed a series of buildings some of which hosted a pottery workshop, with pottery kilns and tools involved in pottery making.²⁶ Two more operations, called DLT2 and DLT3, were opened in the lower town, west of Gird-i Bazar. In the former, sections of rooms belonging to three large free-standing buildings whose layout was visible in the magnetic survey were excavated.²⁷ Based on the presence of large storage vessels placed on the floor, at least one of the excavated rooms may have had a storage function. Operation DLT3 brought to light portions of three buildings, from whose fills a fragment of a baked brick was found, whose fragmentary cuneiform inscription can

22 Herr 2016; 2018.

23 Giraud 2016.

24 Fassbinder et al. 2017.

25 Altaweel and Eckmeier 2019.

26 Kreppner et al. 2018a.

27 Kreppner et al. 2018b.

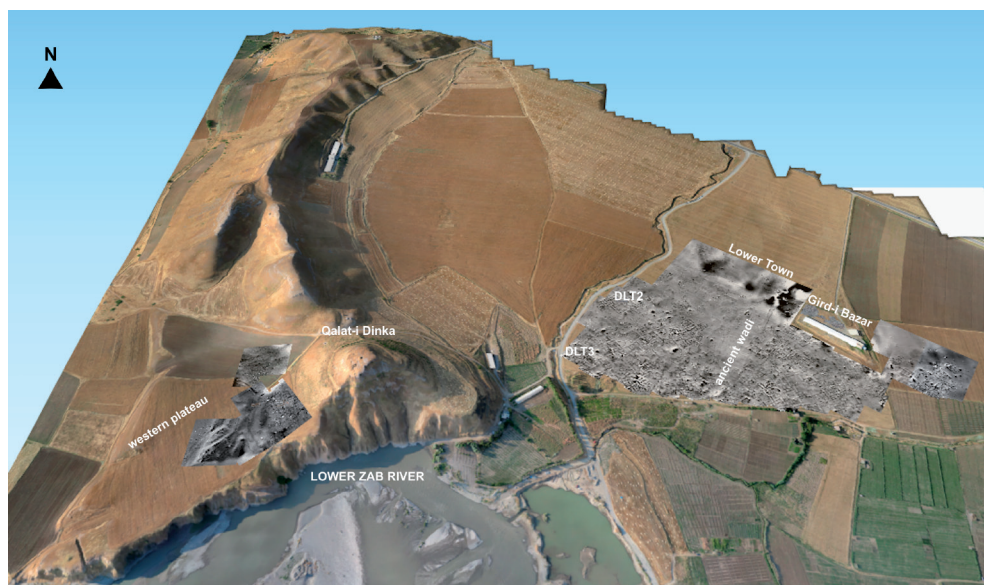


Fig. 4: 3D view of the Dinka Settlement Complex generated in QGIS using DEM and orthophoto created by ICONEM in spring 2016 (courtesy of J. Giraud). The magnetograms are generated by J. Fassbinder and his team. For details, see Fassbinder and Ašandulesei 2016; Fassbinder et al. 2017; Fassbinder et al. 2018; Scheiblecker and Fassbinder 2019.

be attributed to Shalmaneser III (858–824 BCE).²⁸ The radiocarbon dates available for the lower town situate it firmly in the Iron Age, between c. 1200 and 800 BCE. This indicates that the settlement was founded sometime before the Assyrian conquests of the late 9th century BCE.²⁹ The pottery retrieved from Gird-i Bazar and the other operations shows uniform and consistent characteristics, in both shapes and techniques, that can be linked to the Iron Age tradition of the wider Zagros area.³⁰ No substantial change was observed in the pottery of DSC, which might indicate that this tradition lasted for at least the entire span of time covered by the radiocarbon dates (roughly corresponding to Iron Age I and II in archaeological phases), and very possibly continued under the period of imperial control.

The changes that the DSC underwent after the Assyrian conquests of the late 9th century BCE, whether it enlarged, was partially abandoned, or changed function, are still open questions which future research intends to tackle. In this regard, it is worthwhile mentioning that the discovery of human bodies in a Gird-i Bazar well, radiocarbon dated to 748–409 calBCE.³¹ These findings might point to a drastic change that occurred in the settlement from the late 9th onwards, that is when the DSC was under Assyrian control. In particular, the fact that no diagnostic pottery from the Persian period (i.e., c. 5th–4th centuries BCE) has been observed at Gird-i Bazar would suggest an early date for the human bodies retrieved from

28 Radner 2019b.

29 Radner 2019a: 17 fig. A4.

30 Herr 2016; Herr et al. 2018.

31 Downey 2018; Rohde and Downey 2019.

Gird-i Bazar well.³² If one assumes that these bodies were placed in the well³³ when the structures of Gird-i Bazar were no longer in use, then it would be possible to date the abandonment of Gird-i Bazar to after the Assyrian conquests, perhaps as a consequence of the overall rearrangement of the site that occurred under the new rulers, though not immediately after their conquest.³⁴ On the other hand, the cuneiform inscribed brick from operation DLT3³⁵ and the change in architectural phases observed in the same operation would suggest that this part of the settlement continued to be occupied well into the Assyrian period. This is also confirmed by a charcoal sample collected in 2015 from the fill of a geoarchaeological trench that had been opened in the location of operation DLT3, radiocarbon dated to 830–789 calBCE.³⁶ This date fits with the period of Assyrian control over the site. Nevertheless, an overall picture of the transformations that occurred in the lower town while under the Assyrian control is still incomplete and requires further investigation.

Another possible change brought about by the Assyrian control of the area around the DSC may be the construction of the *qanat* system (or part of it), which is still visible in the eastern portion of the Bora Plain, about 1.5 km southeast of Gird-i Bazar (Fig. 5). *Qanats* are underground channels used for agricultural irrigation. They take water from underground water tables and communicate with the surface via vertical shafts.³⁷ Technically, a true *qanat* is one that draws water from a water table, and it would be more appropriate to speak of underground channels in cases that make use of different sources of water (e.g. rivers).³⁸ In our case, the water source for the Bora Plain *qanat* system is still not clear.

At least ten shaft openings are visible in satellite images of the Bora Plain (Fig. 5), whose presence was confirmed by ground-truthing. Some of them are still used today to feed carp ponds.³⁹ This area (dubbed “*qanat* area”) was investigated by Peshdar Plain Project in 2016, 2017, and 2019 by means of ERT surveys, coring, and drone mapping.⁴⁰ The results highlighted a possible underground channel that runs almost parallel to the river in a northwest-southeast direction and that intersects with another east-to-west-running channel. Finding the physical connection between these channels and the DSC was one of the targets of the 2019 spring campaign, whose results are currently undergoing analysis. Although there is no material evidence that helps us to date the Bora Plain *qanat* system, there are some hints that we can connect it to the Assyrians. First, the Assyrian Empire sponsored large-scale irrigation systems aimed at boosting agricultural output in specific areas,⁴¹ and the Assyrians therefore surely had the technology and the experience to reproduce such a system in the Bora Plain. Second, the Iron Age remains at the DSC are the only substantial settlement remains across the entire Bora Plain; the only other substantial remains belong to the Sasanian period cemetery excavated at Gird-i Bazar, but they do not seem to be connected to any large contempo-

32 This conclusion depends, of course, on our current knowledge of Persian period diagnostic pottery of the area, which may be updated by future studies.

33 Anthropological analysis on the bodies from the well to determine whether they were buried or thrown into the well, along with the most probable causes of death, is ongoing.

34 Radner et al. 2018.

35 Radner 2019b.

36 Altaweel and Marsh 2016.

37 English 1998.

38 Bonacossi 2018: 100.

39 Altaweel and Marsh 2016.

40 Altaweel 2017.

41 Bonacossi 2018; Ur 2005.



Fig. 5: Bing satellite image (accessed in May 2020) showing the locations of the *qanat* shafts.

aneous settlement in its proximity.⁴² Hence, it is very likely that the *qanat* system was built during the Iron Age to serve the DSC. Its construction may be linked to the rearrangement of the site undertaken by the Assyrians. Although the Bora Plain lies well within the rain-fed agriculture range, with precipitation averaging 772 mm/year (as measured at Lake Dokan⁴³), it is conceivable that the Assyrians sponsored the implementation of an artificial and more efficient irrigation system in order to boost and / or make more reliable the area's agricultural productivity. An incremental increase in agricultural productivity may have provided the Assyrians with additional benefits in taxes, especially from specific crops such as cereals. Further work on the archaeobotanical remains from the DSC will cast light on the agricultural output of the Bora Plain in relation to the Assyrian presence.

4. Qalat-i Dinka, the citadel of the Dinka Settlement Complex

As mentioned above, the citadel of the DSC lies on the Qalat-i Dinka mound. On the western side, the mound has a rather steep slope that gently merges into a wide plateau about 6 ha in size. The plateau is a few metres higher than the fields to the north and to the west, while to the south it is eroded by the river. A fragmentary Neo-Assyrian cuneiform tablet documenting the sale of a slave woman, dating to 705 BCE and indicating that the DSC lay within

42 Squitieri 2020.

43 See Ali 2007; Altaweel and Marsh 2016.

the Palace Herald province, was found during agricultural work on the western slope,⁴⁴ with the results of the pottery survey confirming the Iron Age occupation of this side of the mound.⁴⁵

Since 2015, this area has been explored by means of geophysical surveys and excavation. The magnetic survey carried out in 2015 revealed a concentration of structures up the slope (Fig. 6B), to the west of which an apparent gap with no features was identified.⁴⁶ Further down the slope, a curved line was also revealed; it is about 120 m long and it seems to enclose the entire area. This line has been interpreted as a possible fortification line, delimiting the built-up area up the slope.⁴⁷ On this line two operations were opened in 2018, called QID2 and QID3 respectively, whose results will be shown below. Close to the north-western end of this line, next to the modern fence, two large door sockets were found lying on the surface, which might have belonged to a large gate located in the proximity.⁴⁸ This evidence has led to the hypothesis that Qalat-i Dinka was once home to a fortified citadel or fortress that served to guard the Lower Zab and the passages across the Zagros mountains. Before moving to the

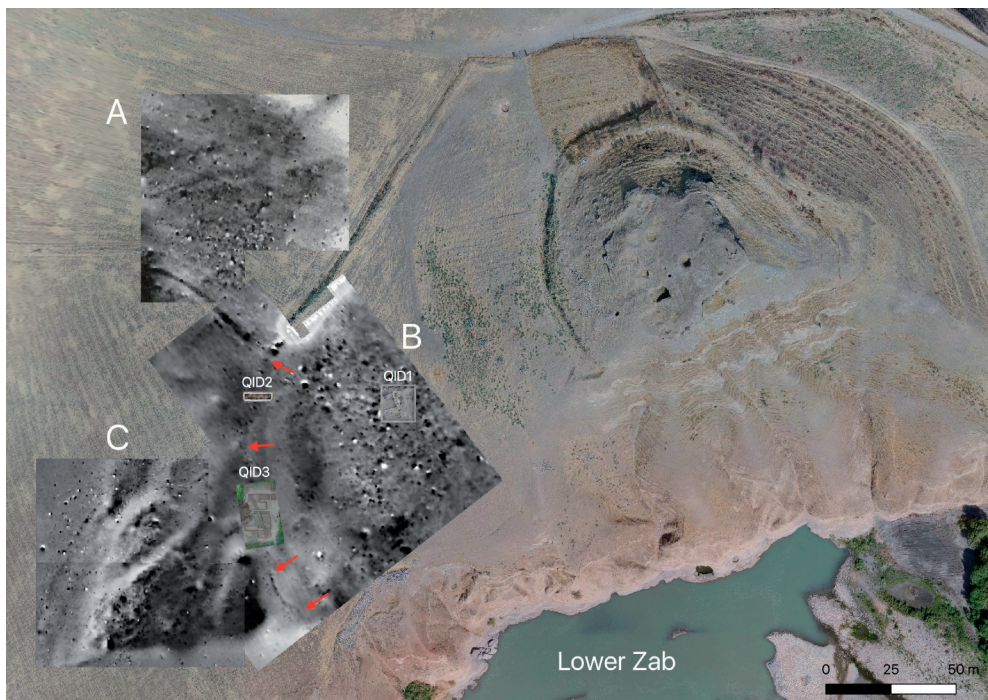


Fig. 6: Orthophoto of the western side of Qalat-i Dinka showing the magnetograms (first published in Fassbinder and Ašandulesei 2016; Scheiblecker and Fassbinder 2019), and the three operations QID1, QID2 and QID3. The red arrows indicate the curved line interpreted as a fortification line.

44 Radner 2015; 2016: 17-18.

45 Giraud 2016.

46 Fassbinder and Ašandulesei 2016.

47 Fassbinder and Ašandulesei 2016: 38.

48 Fassbinder and Ašandulesei 2016: 42 figs. B4.7a-b.

archaeological evidence from Qalat-i Dinka, it is worth mentioning the results of the magnetic prospection carried out in 2018 to the north and west of the area surveyed in 2015.⁴⁹ To the north, some magnetic anomalies seem to point to the existence of more archaeological structures, whose layout, however, is not clear (Fig. 6A); to the west, the results were difficult to interpret, and no regular feature was observed. It is possible that this area, located to the west of the curved line seen in the 2015 magnetogram, contains no archaeological structures, which would further confirm that the curved line marks the end of the settlement on this side (Fig. 6C).

4.1 The protective architecture on the western plateau of Qalat-i Dinka

Two operations, called respectively QID2 and QID3, were opened across the curved line observed in the 2015 magnetogram (Fig. 6B). QID2 is a 10 × 2 m trench located in the northern part of the plateau. Its excavation revealed thick layers of alluvium made of soil and pebbles almost completely devoid of pottery. Roughly 1 m below the surface, a large and sloping stone structure was encountered.⁵⁰ It was 7 m long and 2 m wide, though it may have been larger as the structure extended past the northern, western, and southern excavation limits. It is made of medium and small-sized stones mixed with pottery sherds. Its main characteristic is that it has a slope of about 30 %, with a 2 m difference between the highest point on the east and the lowest point on the west. Here, the lowest level of the structure was not reached by our excavations. To the east, a trodden surface extends to the edge of the trench. Pottery sherds were lying flat on this surface. A depression was noted between the stone structure and the trodden surface. To the south of the trodden surface, a sounding was opened which uncovered additional pottery sherds, including an almost complete vessel.⁵¹ The virgin soil was not reached in any part of the trench, so the full measure of both the stone structure and the floor are not known.

Because of its slope, we interpret this stone structure as a glacis (Fig. 7A). This term has been variously applied in the archaeological literature, generating some confusion about its use.⁵² Broadly, a glacis can be defined as a constructed sloping surface built against a wall or another structure such as an earthbank, with the purpose of reducing erosion and fortifying the structure by creating a further obstacle for enemies.⁵³ Such glacis are attested archaeologically especially in the Levant and Egypt,⁵⁴ where they are built against fortification walls. However, a glacis can also be placed on the outer edge of a ditch, where the removed earth is accumulated to form a sloped earthbank.⁵⁵ In the case of operation QID2, it is difficult to reconstruct the original arrangement of the glacis, considering that only a portion of it has been unearthed; however, the presence of the depression on the top may indicate that a construction, such as wooden palisade, once stood here.⁵⁶ Moreover, the gap seen on the magnetogram to the east of the enclosing line may indicate the presence of a ditch in this area,

49 Scheiblecker and Fassbinder 2019.

50 Hashemi 2019.

51 Hashemi 2019: 63 fig. D36.

52 See, e.g., Wright 1968; 1969; 1997.

53 Burke 2004: 113-114.

54 Burke 2004; Zakbar and Zakbar 1982.

55 Wright 1968: 1.

56 Hashemi 2019: 61.

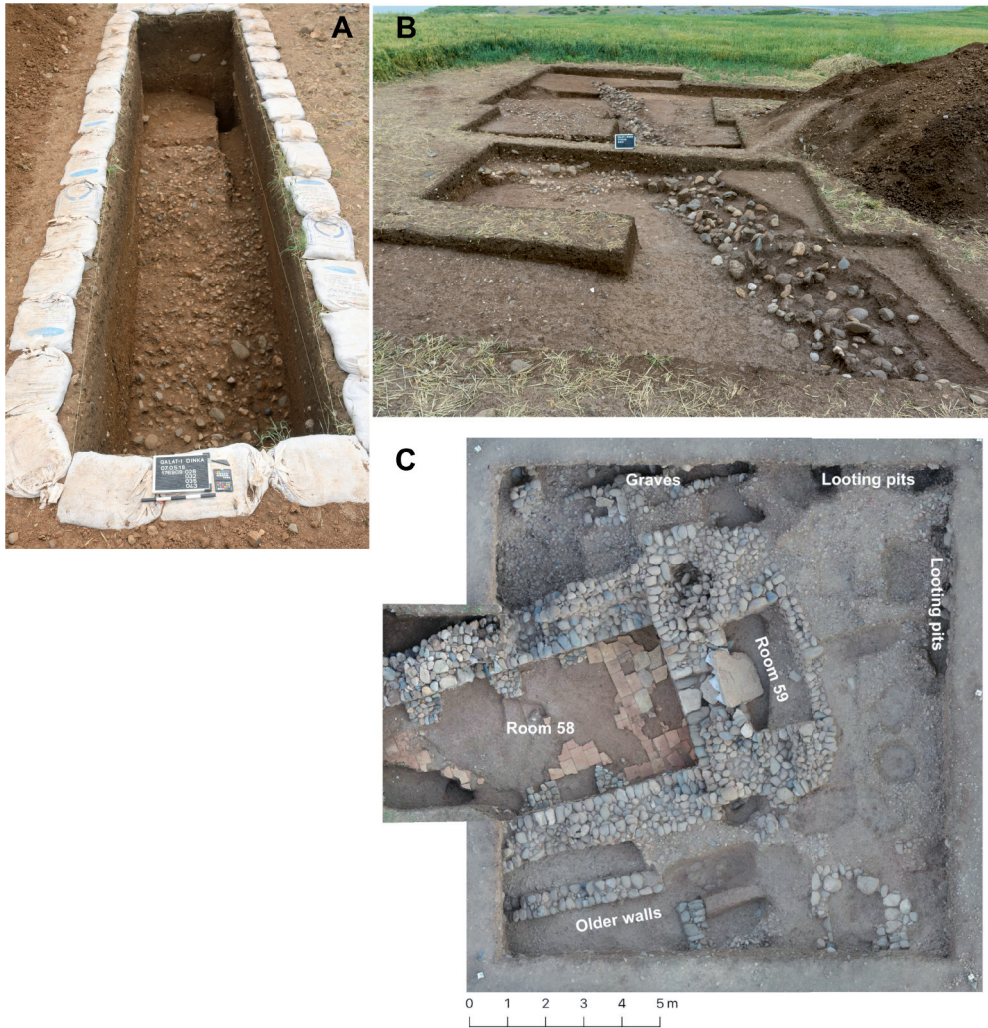


Fig. 7: A: The sloping stone structure in operation QID2 interpreted as a glacis (photo by Z. Hashemi). B: The stone structure in QID3 (photo by F. Wolter). C: Orthophoto of operation QID1 with the structures of Building P (Rooms 58 and 59).

bordered by the glacis. So, it is possible that the glacis of QID2 was built to protect a wall or a palisade, with a ditch beyond it to improve defence.

As for the date of the glacis, no radiocarbon dating was possible; however, the pottery retrieved from the trench is morphologically and technically consistent with the Iron Age pottery from the lower town, thus suggesting contemporaneity.⁵⁷ Whether this glacis was built before or during the period of Assyrian control over the site is still an open question. It is also possible that the Assyrians reused an already existing defensive system, because, as we will

57 Herr et al. 2019: 109.

see below, Qalat-i Dinka represents a strategic observation point in the plain. Hence it may well have been used by the Assyrians to improve their control over the area.

The operation called QID3 is located about 35 m south of QID2 (Fig. 7B).⁵⁸ Here, another stone feature was found, although it is quite different from the one unearthed in QID2. This is a linear feature made of loosely-assembled stones of medium size, oriented in a roughly NW-SE direction. Its width varies between c. 70 cm and 1.5 m. While to the south-east it seems to end within the excavation area, to the north-west it continues beyond the excavation limits. No structures were found on either side of this feature, but what seems to be a trodden surface was uncovered. On this surface, a charcoal sample was collected and radiocarbon dated to 1043–850 calBCE.⁵⁹ This date fits very well the range of dates obtained from the other operation on Qalat-i Dinka (QID1, discussed below) and the lower town. The purpose of this feature in QID3 is difficult to ascertain, though it is plausible that it may have been a substructure to support a mudbrick or wooden construction, perhaps a palisade with a defensive and demarcating function.

In conclusion, operations QID2 and QID3 have revealed structures that can be related to the need for demarcating and protecting the edge of the settlement. The physical connection between these two operations is missing, but it is possible that the curved anomaly visible in the magnetogram represents the continuation of the structure unearthed in QID3 (which was not so deep under the surface), to which a glacis-like structure was associated, partially unearthed in QID2.

4.2 “Building P”

Moving eastwards, up the slope, additional archaeological features were highlighted in the 2015 magnetogram, although their layouts did not show up very clearly. This area was investigated in 2016, 2018, and 2019 with the excavation of operation QID1 (Figs. 6, 7C).⁶⁰ Overall, an area of about 190 m² was excavated. The study of the features unearthed in QID1 is challenging, because the entire area was severely damaged by the excavation of several looting pits which irremediably altered the stratigraphy. The looting pits damaged every archaeological feature in QID1. Thanks to a date printed on a biscuit package found in 2016 in one of the looting pits, it is possible to date at least some of the looting activity to after 1999.⁶¹ Because the topsoil did not show any traces of looting, it is very possible that this activity had ceased in more recent years. Overall, operation QID1 yielded two categories of archaeological features: one massive architectural structure belonging to a building called Building P, and several graves (of different types: cist graves, simple pits, and cremation burials). The graves had been robbed by looters, and some were even completely obliterated judging by the quantity of very fragmented human bones found in the fills.

In this section, I will focus on the architecture of Building P. Compared to the buildings unearthed in the lower town, the monumentality of Building P is striking. It consists of a large room (called Room 58) and a smaller room (Room 59) to its east. Room 58 measures 8 × 4 m, though its westernmost limit has not been completely unearthed. It is bordered to

58 Wolter 2019.

59 Radner and Squitieri 2019.

60 Herr 2019.

61 Kreppner and Squitieri 2017: 48.

the north and south by two stone walls reaching a width of 1.5 m. To the east, it is bordered by another massive wall with a 1.2 m wide threshold, made of two large and flat stones. The threshold is 90 cm higher than Room 58's floor. This floor is paved with flat-backed bricks alternated with flat stone slabs. Originally, this floor must have covered an area of about 27 m².⁶² Room 58 is also equipped with five pilasters whose stone bases are still preserved: three against the northern wall and two against the southern wall. Another feature of Room 58 is an 80 cm wide by 3 m long step in the structure of its northern and southern walls. Past the steps, towards the west, both walls have a solid structure. These steps may be what remains of niches opened in both walls, or high benches.

It is not clear if Room 58 was originally roofed. The presence of the paved floor might suggest it was unroofed as similar bricks were used in Courtyard 18 of Building I in the lower town to pave part of an open courtyard;⁶³ however, roofing is also a possible option considering that Room 58 is 4 m wide, a distance that could have been covered without the need for central support columns by using beams. This issue is connected to the function of the pilasters, which is also not clear. They may have been buttresses constructed to reinforce the walls, a solution that can be observed at various sites, such as Baba Jan.⁶⁴ The wide stone walls of Room 58, however, may have not have required buttresses as reinforcements. Moreover, no evidence for a pilaster superstructure has been found during the excavation of Room 58. It is possible that the pilasters were originally connected to shelving,⁶⁵ of which no trace has been preserved, which may have alternated with the niches mentioned above.

To the east of Room 58, a monumental threshold connects to Room 59. In contrast to the larger Room 58, Room 59 measures about 5 m² and its floor, made of small pebbles, is higher than the floor in Room 58 as a consequence of the natural slope on which Building P was constructed. To the northwest and southwest, Room 59 is bordered by the corners of Building P. The south-western corner has a curved layout, while the north-western corner has a large almost squarish shape measuring about 2.5 × 3.5 m, which unfortunately was damaged by looters in the middle. This gives Building P a somewhat asymmetrical layout. Inside Room 59, the only find was a large stone slab measuring 1.5 × 1.3 × 0.14 m. It was found in an upright position⁶⁶ and evidently it had been lifted and then left in this position by looters. The stone slab has a carved circular depression of about 20 cm in diameter on one of its corners. The stone's original position and function are not clear, though it is possible it was originally used as a paving stone in the floor of Room 59. To the east, Room 59 is bordered by a small wall built against a thick package of pebbles and pottery sherds which forms the walking surface for the outdoor area that extends to the north, east, and south of Building P.

The size and width of the walls, the paved floor, the pilasters, the monumental threshold, and the niches or high benches make Building P unparalleled in the lower town. Nevertheless, some links with the latter do exist. The wall construction technique, using cobbles enclosing a core of smaller stones with no mortar, is the same in both the lower town and the citadel; additionally, the flat bricks used to pave the floor Room 58 can be found in the lower town, although they are used to a lesser extent. These connections suggest that Building P was con-

62 Herr 2019: 52.

63 Bartl 2018: 92.

64 Baba Jan, level III, rooms 3 and 5, see Goff 1977: fig. 1.

65 Herr 2019: 52.

66 Herr 2019: 53-55.

temporaneous with the structures of the lower town. This is also confirmed by the radiocarbon date obtained from a charcoal sample from Room 58's floor, dated to 1001–847 calBCE, which is consistent with both the date obtained from operation QID3 and those obtained from the lower town.⁶⁷ Based on this date, it can be suggested that Building P was erected before the arrival of the Assyrians, and perhaps continued to be used for some time after their conquest.

In this respect, it is worth mentioning the graves excavated during the 2019 campaign, around Building P. These graves were probably installed after Building P went out of use, though this is not clear due to the looting activity that has altered their stratigraphic relationships. One of the graves was radiocarbon dated to 748–409 calBCE (Grave 110),⁶⁸ so if we assume that at least this grave was installed after Building P's main-use period, then Building P may have been in use until the early 8th century BCE. It is hoped that future research will cast light on this issue and clarify the relationship between the building and the graves that surround it.

The architecture of Building P suggests a monumental structure, isolated within its immediate vicinity, although the magnetogram shows other possible large structures that may be located to the south and southwest of Building P at a distance of about 10–15 m. Based on the distinctive features that set it apart from the other buildings of DSC, Building P surely did not have a domestic function. The objects retrieved from its fills partially help in trying to define its function, although in most cases, they cannot be clearly associated with the building itself because of the modern looting activities.⁶⁹ Nevertheless, the ivory or bone fragments found in abundance in Room 58's fills and on its floor very possibly belong to the original furniture of this room,⁷⁰ as no such item was found in the excavated graves.⁷¹ These items show decorative patterns such as rosettes, guilloches, and palmettes which situate them in the Iron Age tradition; they were likely used to decorate pieces of wooden furniture or other items. These objects have no parallels in the lower town, providing another marked difference between Building P and the other DSC buildings. The presence of these items may point to the existence of an elite residence either in Building P itself or in a building in its vicinity.

In conclusion, Building P represents an exceptional structure within DSC. Its architecture and the ivory (or bone) items retrieved from it suggest that it was an elite residence, or that it was part of an arrangement where the local elites resided. Its specific function cannot be clearly defined; however, its massive walls and large southwestern corner confer on the structure a fort-like aspect. Although it is on a much larger scale, a comparison with the Iron Age II citadel of Hasanlu can be drawn. Hasanlu is composed of a series of buildings that share a similar layout, though apparently having different functions (e.g., temples, elite residences, storage areas), protected by a fortification wall, which has been unearthed in small exposures.⁷² Building P along with the other structures on the slope of Qalat-i Dinka that were highlighted on the magnetogram may be a smaller-scale reproduction of Hasanlu citadel, with a possible fortification line located down the slope from operations QID2 and QID3. Whether Building P itself was originally a fort is still not clear, although it is possible. However, the section below will investigate the possibility that Qalat-i Dinka served as an

67 Radner and Squitieri 2019.

68 For the date see Radner, Amelirad and Azizi 2020: 106-107.

69 Squitieri 2019.

70 Squitieri 2019: 126-128.

71 For the results of the 2019 campaign see Radner, Kreppner and Squitieri 2020.

72 Danti 2013: 63, fig. 1.6.

ideal observation point within the plain, and may also have been used for defensive purposes. In this respect, it is also possible that a watch tower may have existed on the very top of the mound, as suggested by the many baked bricks found on all slopes of the mound.

5. Gawr Miran: an ideal vantage point over the Peshdar Plain

In the sections above, I have summarised the results of the investigations carried out at Qalat-i Dinka that provide the most credibility to the possibility that it was a fortified citadel. Before looking at the possible defensive function of Qalat-i Dinka based on its position in the landscape, I will also introduce, in conjunction with that of Qalat-i Dinka, the potential defensive function of the site of Gawr Miran. Gawr Miran extends to about 5 ha and is located on the hills bordering the Bora Plain, about 3.5 km east of Qalat-i Dinka, and sits about 120 m higher (Fig. 8). It offers a view over a vast area encompassing the entire Bora Plain and beyond, which makes it an ideal strategic observation point. The pottery survey found Iron Age pottery on this site, of the same type as that found in the DSC.⁷³ In 2016, the magnetic survey revealed the presence of a large mudbrick or limestone construction.⁷⁴ The presence of



Fig. 8: 3D view of the Bora Plain showing the Dinka Settlement Complex and Gawr Miran in the background, and the *qanat* area in the foreground. Generated in QIGS using a SRTM 1 Arc-Second Global DEM (30 m resolution, downloaded from USGS), overlying BING satellite image (accessed in May 2020).

Iron Age pottery makes this site contemporary to the DSC. Its strategic position coupled with the presence of a large building leads us to think that it may have hosted a watch tower or a similar structure, to aid observation. Rectangular stone structures interpreted as watchtowers with military purposes, often located on high mounds, have been identified in the area of Lake Urmia and on the citadel area, and their use is also mentioned in Neo-Assyrian texts.⁷⁵

73 Giraud 2016.

74 Fassbinder et al. 2017: 28.

75 Coşkun et al. 2020; Muscarella 1986.

Gawr Miran may have hosted a similar structure, and along with Qalat-i Dinka it may have functioned together as an ensemble to guarantee a wide view over the area, as I will next demonstrate.

6. The Qalat-i Dinka–Gawr Miran observation system

In this section, I will present the results of the visibility analysis using Qalat-i Dinka and Gawr Miran as observation points. The analysis was conducted in QGIS using a SRTM 1 Arc-Second Global DEM (spatial resolution: 30 m). Both the observer and target heights were set at 15 m, with a radius of visibility set at 30 km. The output is shown in Figs. 9–10. Both figures also show the passages through the Zagros mountains discussed previously, and the sites of Girdi Gulak, Usu Aska, and Qalat Said Ahmadan, where relevant Iron Age structures have been unearthed. The remains of Girdi Gulak and Usu Aska have been connected to fortresses dating to the Neo-Assyrian period, the first located in the Ranya Plain,⁷⁶ the second in the Darband-i Ranya pass,⁷⁷ a strategic location for controlling access to the Peshdar Plain. Qalat Said Ahmadan is a large tell that rises out of the Peshdar Plain, about 10 km north of

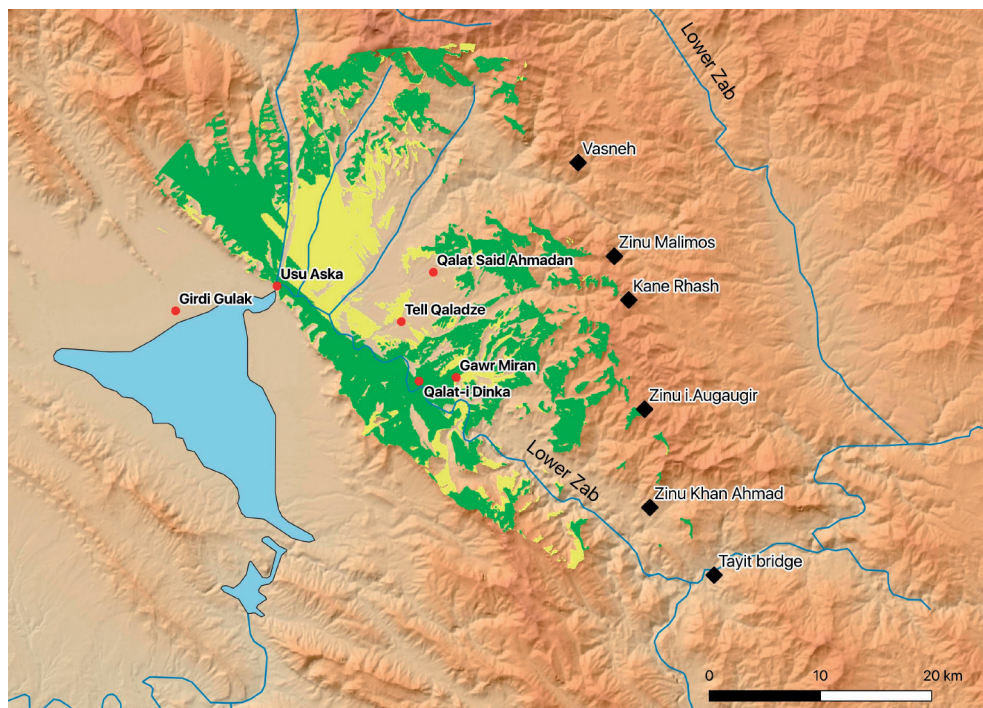


Fig. 9: Viewshed analysis generated in QGIS. View range: 30 km, target heights: 15 m. Green: viewshed from the top of Qalat-i Dinka. Yellow: viewshed from Gawr Miran. The location of the mountain passes is taken from Levine 1973.

76 Colantoni et al. 2018.

77 MacGinnis 2019; MacGinnis et al. 2020.

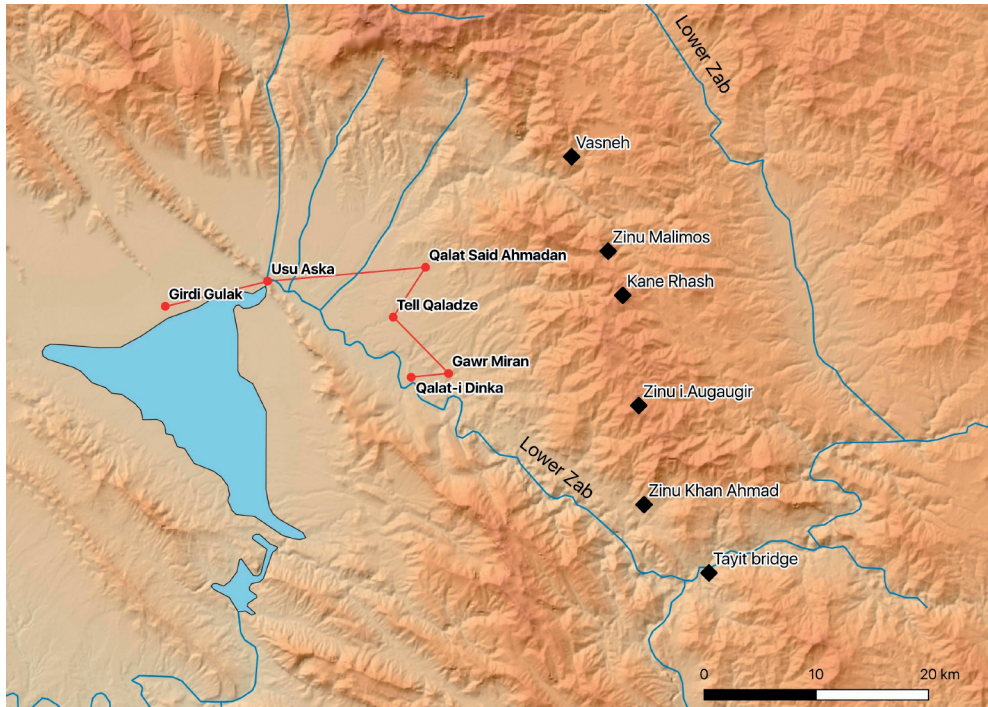


Fig. 10: Visibility network analysis generated in QGIS. View range: 30 km, target heights: 15 m. The location of the mountain passes is taken from Levine 1973.

Qalat-i Dinka.⁷⁸ On its top, Iron Age structures were found that, given their vantage point over the plain, were thought to have a military function. The tell of Qaladze was also included in the analysis, as this site has been identified with the ancient Anisu, the main population centre in the area during the Neo-Assyrian period (see above).

Fig. 9 shows the viewshed analysis results. The green shed represents the view from Qalat-i Dinka, while the yellow that from Gawr Miran. It is immediately noticeable that both viewsheds cover almost half of the Peshdar Plain, plus a good portion of the Lower Zab river course, up to the passage of Darband-i Ranya where the fort of Usu Aska lies. The area south of the river is also visible, covering the eastern versant of the Kurkur Dagħ mountain range. Tell Qaladze is also within the visibility range, as well as the area around Qalat Said Ahmadan. To the north, the viewshed extends up to the mountains west of Rania, named Kuh-i Resh, which were crossed by routes from the kingdom of Muṣaṣir. Moreover, at least two passes across the Zagros fall within the visibility range, namely Kane Rhash and Zinu-Augaugir, both providing access to the Sardasht plain in Iran, where the Kingdom of Ḫubuškia was located. Therefore, both Qalat-i Dinka and Gawr Miran had an ideal vantage point for controlling a great portion of the Peshdar Plain up to its northernmost fringes, the Lower Zab course as far as the passage to the Ranya Plain, the mountain ranges dividing the Peshdar from the Ranya Plain, plus the mountain passes leading to the area of Ḫubuškia, crossing the Zagros *chaîne magistrale*. During the period of Assyrian control over the Peshdar

78 Tsuneki et al. 2016.

Plain, both Qalat-i Dinka and Gawr Miran could have been used as an ensemble to guard a vast range of communication paths both within and beyond the Empire's borders. Fig. 10 shows the results of the visibility network analysis that uses the same parameters as the viewshed analysis above. Here, it is possible to see that Qalat-i Dinka and Gawr Miran constitute an ensemble in that both could provide views of other sites of the Peshdar Plain through a network of mutual fields of vision that eventually led to the Ranya Plain. In this system, a beacon signal that began at one of these sites could have been transferred across the network, alerting others throughout a considerable area of the Peshdar Plain.

7. Conclusions: emerging archaeological evidence on the Assyrian defensive system in the Peshdar Plain

Recent archaeological fieldwork undertaken in the Peshdar Plain has started to shed new light on the materiality of the defensive strategies that the Assyrians implemented after the creation of the Palace Herald province in this area in the late 9th century BCE. The Peshdar Plain Project's investigations at the Dinka Settlement Complex have revealed a settlement founded prior to the Assyrian arrival which underwent considerable change after the Assyrian conquest of the area, including the construction of an artificial irrigation system designed to boost agricultural output in order to better serve the economic and administrative needs of its new rulers. In Qalat-i Dinka, the citadel of the Dinka Settlement Complex, some structures have been unearthed that point to the existence of a fortified citadel, where local elites may have resided. The Assyrians may well have reused a previously-existing citadel, as it was ideally situated in the plain for controlling several routes.

Our visibility analysis has demonstrated that, in conjunction with the site of Gawr Miran, the Dinka Settlement Complex citadel represented an ideal observation point for extending the level of visibility along the Lower Zab up to the northernmost riches of the Peshdar Plain, where routes going to both the Ranya plain and the kingdom of Muṣaṣir existed. This range of visibility could also extend as far as the passes through the Zagros chain leading to the Iranian plateau, towards the kingdoms of Mannea and Ḫubuškia. Together with other Iron Age sites in the area, the Qalat-i Dinka–Gawr Miran system contributed to a much larger communication and surveillance network that on the one hand enabled close monitoring of strategically important and sensitive pathways along which people and goods destined for the imperial core area could safely travel, and on the other hand facilitated the early identification of potential threats to the Empire, which could then be signalled along the network's communication lines.

This picture, drawn from the analysis of recent fieldwork results in the Peshdar Plain, seems to correspond to the "chains of fortresses" as known from the contemporary Assyrian textual sources. Intriguingly, however, our analysis demonstrates that this fortress system did not run along the border separating the Assyrian holdings from the neighbouring polities. Instead, the network of fortifications guarding the Lower Zab, and the accompanying communication lines, led deep into the Assyrian territories. While future fieldwork is expected to further improve our understanding of the Assyrian defensive system on the Empire's eastern border, the results of the present analysis offer important data also for the assessment of the Empire's other border and contact zones, such as the Upper Tigris region, the Cilician plain, or the southern Levant.

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