

Twelve Royal Stelas for Twelve Great Gods: New Discoveries at the Khinis Monumental Complex¹

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Abstract The article presents the latest results of the exploration conducted by Udine University's Land of Nineveh Archaeological Project at the monumental site of Khinis, the imposing rock-art complex carved by Sennacherib at the head of the canal that the king named after himself ('Sennacherib's Canal'). The canal was part of the regional hydraulic network in the land behind Nineveh, which was built by the king in around 690 BC and commemorated by the so-called 'Bavian Inscription'. The discussion focuses on the results of the recent investigations conducted at the Khinis quarry, which to date is the only Neo-Assyrian quarry that is known archaeologically, and on the rock reliefs that commemorate this unique memorial complex. A new rock-cut stela has been discovered by LoNAP, together with at least three previously unknown sculptured panels located along the Khinis cliff to the north of the monolith at the canal gate, one of which still conserves part of its sculpted decoration.

The extensive use of state-of-the-art investigation and recording techniques, such as laser scanner survey, digital photogrammetry, 3D modelling, micro-relief recording, and UAV survey has made possible these and other significant new discoveries, resulting in substantial progress in our knowledge of this astonishing rock-art complex.

Since 2012, the Italian Archaeological Mission to Assyria of Udine University has been conducting the Land of Nineveh Archaeological Project (henceforth LoNAP), a multidisciplinary landscape archaeology project in one of the hitherto most uncharted regions of Northern Mesopotamia, embracing large parts of the governorates of Duhok and Ninawa (Mosul) in the north-western region of Iraqi Kurdistan (Figure 1).

LoNAP is an integrated project aiming at investigating the formation and transformation of the cultural and natural landscape of this region bounded by the Tigris Valley, comprising the Zagros foothills dominating the modern city of Duhok, and the Navkur plain crossed by the Gomel and Al-Khazir rivers that extends east of the modern town

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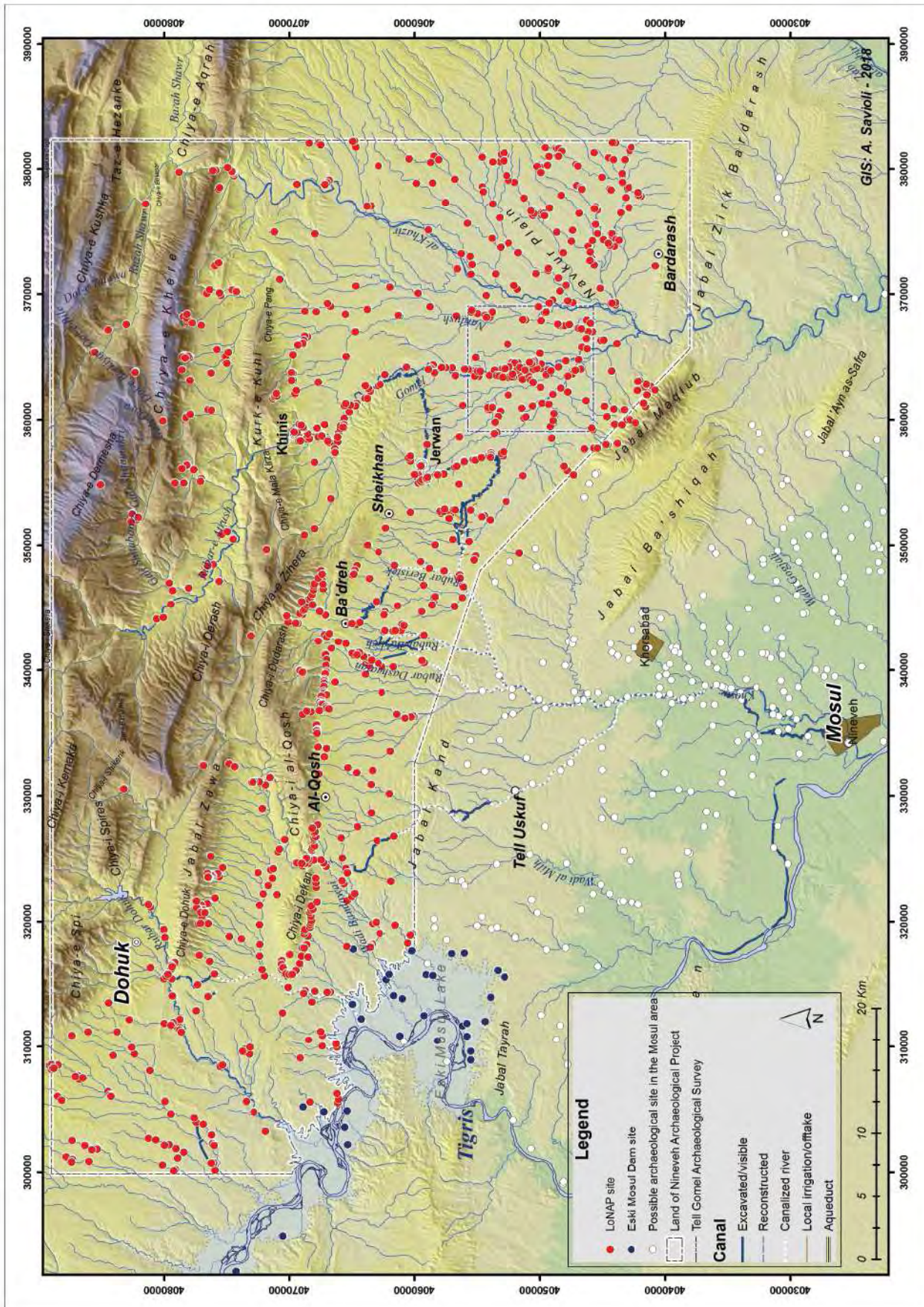


Figure 1: Location of the Land of Nineveh Archaeological Project survey area in northern Iraqi Kurdistan and distribution of archaeological sites discovered in the 2012-2017 survey campaigns.

of Sheikhan and the Jebel Maqloub. The exploration of settlement patterns and land use and management in the region from the Palaeolithic to the Islamic period is combined with the study of demographic dynamics, the itineraries traversing the region and its connections to the long-distance trade routes that crossed Upper Mesopotamia. The geoarchaeological and bioarchaeological reconstruction of the ancient climate and natural environment, and the evolution of the latter as a result of global climatic fluctuations and human impact represent a further focal point of the research.

The geoarchaeological and topographical study – and recording by means of laser scanning, digital photogrammetry, and UAV survey – of the still poorly understood canal system built by the Assyrian king Sennacherib (704–681 BC) to bring water to Nineveh and irrigate its hinterland (Jacobsen and Lloyd 1935; Reade 1978; Bagg 2000; Ur 2005; Morandi Bonacossi 2018a) are part of LoNAP's work to contribute to the protection and conservation of the severely endangered cultural heritage of the Duhok region. This impressive hydraulic system has hitherto never been investigated through a dedicated field project. In cooperation with the Italian Ministry of Foreign Affairs and International Cooperation, LoNAP is also engaged in recording all the rock reliefs (Maltaï, Faideh, Shiru Maliktha, Khinis) and monuments (Jerwan aqueduct) that are connected to the canal system and is drafting a proposal for their conservation, protection, and management. The ultimate goal of these undertakings is to propose to the KRG authorities the creation of an archaeological park of the Assyrian irrigation system and to prepare all the necessary documentation to recommend this unique complex of rock reliefs, canal networks and aqueducts for nomination for the UNESCO World Heritage Tentative List.

LoNAP's methods and preliminary results have already been presented in several articles and – due to space constraints – are not recounted here.² This contribution focuses on the new results of the exploration of the monumental site of Khinis, the most imposing rock-art complex carved by Sennacherib at the head of the canal of stage 4 of his regional hydraulic network, built by the sovereign in around 690 BC and commemorated by the so-called 'Bavian Inscription' of c. 688 BC (Figures 2-3).³

The sculptural complex of Khinis has been the focus of lengthy – though to a certain extent anecdotal – field research since its discovery by Simon Rouet (1846), the French Consul at Mosul in 1845. The canal head of the 'Patti Sennacherib' (the canal of Sennacherib) with a well-known monumental sculptured monolith marking its beginning, the limestone quarry, and the impressive complex of rock-stelas and reliefs carved on the Khinis cliff have already been extensively discussed in previous studies.⁴

² See e.g. Morandi Bonacossi 2014, 2016, 2018a-b; Morandi Bonacossi and Iamoni 2015; Gavagnin, Iamoni, and Palermo 2016; Iamoni 2016; Palermo 2016; Coppini 2018.

³ For a description of this impressive irrigation programme and its various branches, see especially Reade 1978 and Bagg 2000. For a new interpretation, see Morandi Bonacossi 2018a.

⁴ Layard 1853: 207-216; Sachau 1900: 118; Wigram and Wigram 1914 [1922]: 122-124; Bachmann 1927; Jacobsen and Lloyd 1935: 44-49; Oates 1968: 49-52; Reade 1978: 168-170; Boehmer 1997; Bagg 2000: 212-224; Ur 2005: 335-339; Bär 2006; Reade and Anderson 2013: 97-118; Fales 2017; Morandi Bonacossi 2018a: 89-98.

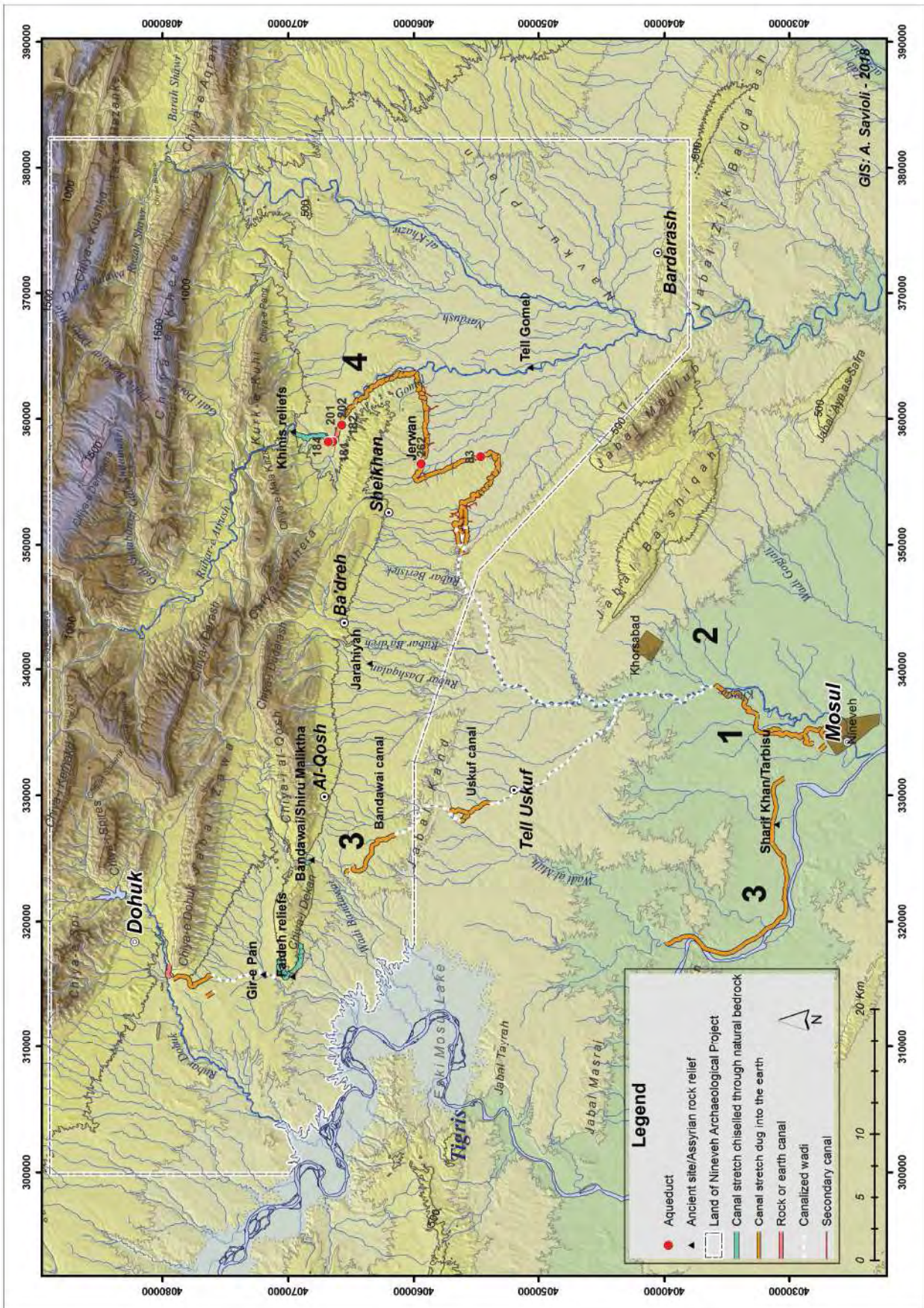


Figure 2: Preliminary reconstruction of the surveyed Neo-Assyrian canals in the Nineveh hinterland. Numbers refer to the four stages of Sennacherib's canal network.

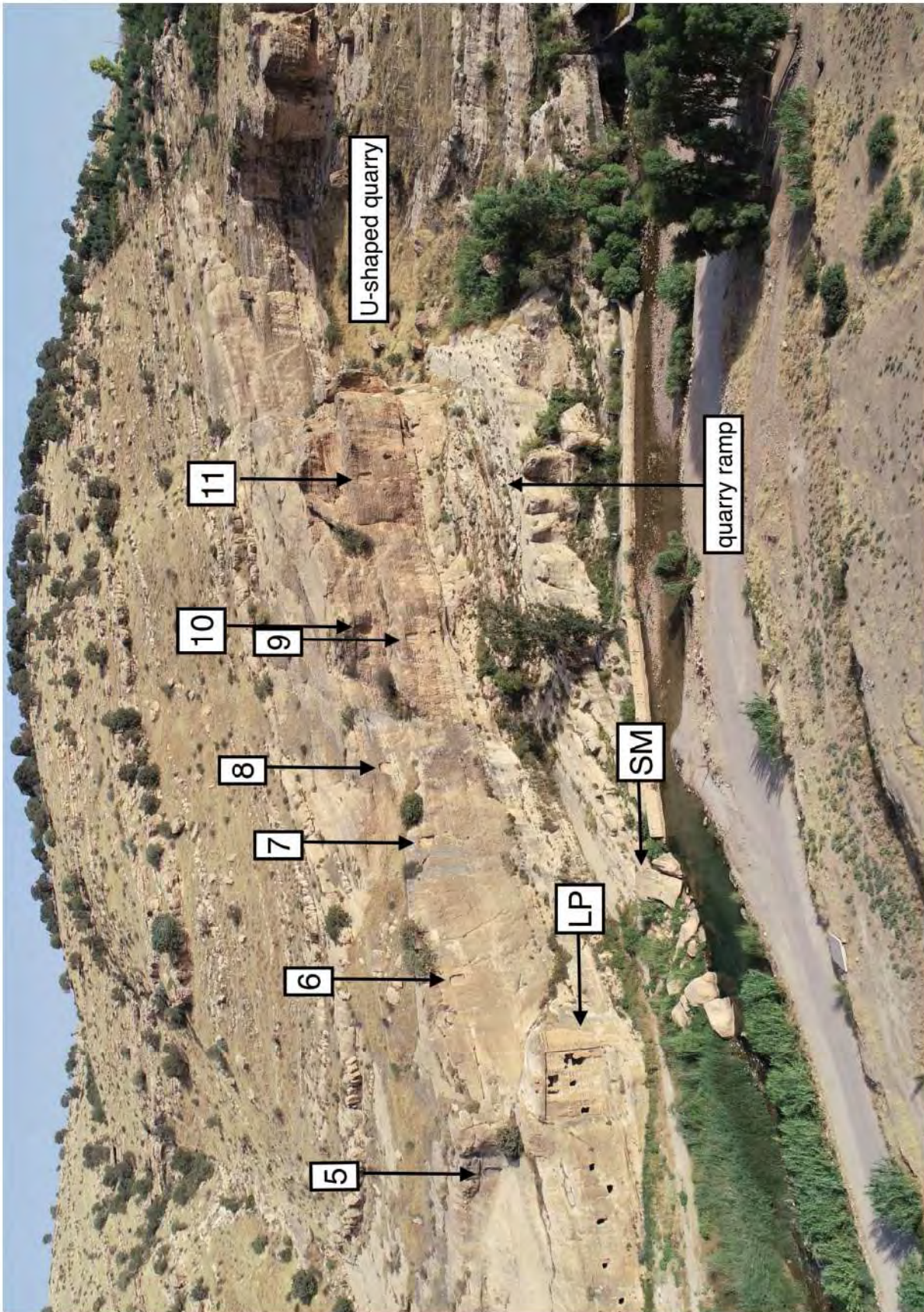


Figure 3: UAV view of the central part of the Khinis complex with the Large Panel (LP), the Sculptured Monolith at the canal gate (SM), stelae 5-11, the inclined quarry ramp and the U-shaped quarry.

However, the richness and complexity of the site are so extraordinary that more thorough field investigations have allowed LoNAP to detect new important sculptural elements, and explore aspects, which had so far gone unrecognised, thus making it now possible to fully understand the internal organisation, conceptual ramifications, and importance of the Khinis monumental complex.

A brief insight into an Assyrian limestone quarry

William Ainger Wigram – a clergymen travelling between 1902 and 1912 across the Ottoman Empire on behalf of the Church of England together with his brother, Sir Edgar Thomas Ainger Wigram, as illustrator – was the first explorer to suggest that the Khinis cliff was used as a quarry before its transformation into the most majestic place of collective memory in the Assyrian Empire (Wigram and Wigram 1914 [1922]: 122-124). He was followed by Bachmann (1927) and Jacobsen and Lloyd (1935), who, however – overcome by the astonishing remains of the canal and sculptures surrounding it – did not give the quarry the attention that it deserved. In fact, the Khinis quarry is so far the only Neo-Assyrian quarry that is known archaeologically. The locations along the Tigris of the two famous quarries in the Nineveh environs mentioned in his inscriptions by Sennacherib – Tasiate to the north-west of Nineveh, which had been used by earlier kings,⁵ and in the territory of the city Balāṭāya to the north of the city⁶ – have yet to be identified (Reade 1990; Russel 1991: 94-105).⁷ During the 2017 field season, as part of the LoNAP research activities, Jeanine Abdul Massih⁸ carried out a systematic survey of the Khinis quarry. The presentation of her work will be part of the (forthcoming) final publication of LoNAP's results, but some preliminary conclusions are briefly outlined here.⁹

The two cliffs on either side of the River Gomel at Khinis expose rocks belonging to the Middle Miocene Lower Fars limestone formation, which has an overall thickness varying between 100 and 500 m.¹⁰ They are composed of horizontal limestone beds that have been tilted by orogenic movements. The nature of the limestone in these strata varies from a very pure and homogeneous stone to soft fragmented marls that are easily eroded, thus exposing the hard and higher quality limestone layers.

⁵ Grayson and Novotny 2012: no. 17: v, line 65.

⁶ Grayson and Novotny 2012: no. 17: vi, line 62-79. The Balāṭāya quarry was probably located on the river left bank in the region of present-day Eski Mosul, medieval Balad (Russel 1991: 97-99 and footnote 10 for the identification of Assyrian Balāṭāya with medieval Balad).

⁷ Sennacherib's octagonal clay prisms also mention quarries used by the king on Mount Nipur (present-day Cudi Dağ in south-eastern Turkey), Kapridargila in the Tell Ahmar/Til-Barsip area in the Upper Syrian Euphrates Valley, and on Mount Ammanana, the Anti-Lebanon ridge (Grayson and Novotny 2012: no. 17: vi, lines 53-61).

⁸ Lebanese University, Beirut.

⁹ The following discussion of the Khinis quarry is based on Abdul Massih's unpublished 2017 report 'The Assyrian Quarry in Khinis. Extraction and Stone Transportation'. I am very grateful to the author for the excellent work she carried out at Khinis and for the many fruitful discussions about the quarry and stone extraction and transportation techniques that we had during her stay in Iraqi Kurdistan.

¹⁰ Geological Map of Iraq, Al-Mosul Quadrangle, Sheet NJ-38-13, 1995.

The Assyrians performed two types of limestone extraction at Khinis: traditional quarrying in the large U-shaped quarry with horizontal stone layers to the north of the canal head monolith on the west bank of the River Gomel, and more opportunistic exploitation of the inclined rock beds exposed in the mountainsides on both sides of the river south of the monolith (Figure 4). Here the geological layers slope markedly, with limestone of diverse qualities. The more rapid erosion of the softer deposits has brought to light the hard limestone layers, the exploitation of which was rather unchallenging. The Assyrian quarrymen had only to choose the strata that could be easily reached in the cliff section. The occurrence of the limestone in regular layers meant that the quarrymen could extract it in a series of steps without difficulty; the cut blocks were then transported southwards to the river down the slope of the tilted geological stratum (Figure 5). This convenient stone extraction was a low-cost activity that allowed the Assyrians to quarry large quantities of high-quality construction material expending little effort.

The quarry to the north of the canal head had already been identified by Bachmann (1927: 4) and Jacobsen and Lloyd (1935: 13) as the source of the limestone ashlar used to build the Jerwan aqueduct.¹¹ The quarry bottom was strongly inclined southwards and was used as a ramp to slide the blocks from the extraction area towards the river for transportation further afield (Figure 6).

The ramp led to a sector of the cliff where a large U-shaped limestone quarry was dug, characterised by the regular horizontal stratification of the geological layers and vertical joints in the rock. Here to extract the limestone, trenches were dug at the sides and back of blocks, which were then simply pulled out (Figure 7).

They were then transported along the sloping strata and down the ramp. The quarried blocks were probably moved on wooden boards or sledges that slid on long wooden elements used as rails. Elongated wear marks are still present on the surface of the ramp, thus confirming the use of several wooden beams running downslope on which the limestone blocks were slid down towards the transportation area on the river. The marks examined indicate that these elements were generally 9-10cm wide and could be 50-60cm to 3-4m long.

The inclined surface of the quarry is dotted with dozens of circular holes with diameters of about 0.8-1m (Figures 3, 6 and 8).

On the basis of analogy with similar evidence uncovered at the *Bit Akitu* built by Sennacherib at Ashur, Bachmann suggested that these holes were used to plant trees or shrubs (1927: 4-5) in order to create a garden behind the sculptured limestone monolith of the canal gate. Study of ancient Roman quarrying techniques, however, has shown

¹¹ Petrographic analysis carried out by Fabrizio Antonelli at the 'Laboratory for the Analysis of Ancient Materials' of the *Istituto Universitario di Architettura di Venezia* has shown that the limestone used at Jerwan is indistinguishable from the stone quarried by the Assyrians at Khinis.



Figure 4: UAV view of the Khinis quarry from the NE with inclined limestone beds on both riverbanks (image top) and horizontal beds to the north of the Sculptured Monolith at the canal gate (SM) (image bottom).



Figure 5: View of the quarry west bank to the south of the sculptured monolith, with limestone beds sloping southward.



Figure 6: UAV view of the inclined ramp (lower left) and U-shaped quarry (centre).

that the quarried stone blocks were moved across the sloping surfaces of quarries on wooden rollers or rails (Adam 1999). In order to better control the heavy blocks, their descent was slowed down using ropes fastened to wooden poles placed in holes hewn into the bedrock of the same size and shape – and arranged in a similar pattern – as



Figure 7: Limestone block with extraction traces.

those found at Khinis.¹² Remarkably, one of these round holes cut into the rock is located few metres north of the top of the Large Panel, 15.70m above the ramp base. This indicates that the Assyrian quarrymen started to quarry limestone blocks from

¹²Jacobsen and Lloyd suggested this possibility in passing but offered no further analysis (1935: 49).



Figure 8: UAV view of the Khinis cliff with reliefs from the NNE: 1-12 rock-cut stelae; RR Rider Relief; LP Large Panel; SM Sculptured Monolith at the canal gate; RBR Riverbank Reliefs.

at least this height and that limestone extraction in this part of the quarry was very intensive.

Some of the pits are connected by small, shallow channels for water. In particular, these can be seen on the edge of the ramp near the ‘Lions’ Fountain’ (Bachmann 1927: 13; Jacobsen and Lloyd 1935: 49). This suggests that – after the use of the Khinis cliff as a limestone quarry and the completion of Sennacherib’s Canal and the entire monumental complex – the ramp with the holes left by the Assyrian quarrymen at the bottom of the quarry may have in fact been redeveloped through the planting of trees, thus surrounding the newly accomplished grandiose rock-art complex with a lush garden as suggested by Bachmann.

Of course the Assyrian quarry at Khinis exhibits many other most interesting features related to quarrying techniques, tool marks, the organisation of quarrying – and calculations of the cubic metres of limestone that could have been extracted.¹³ These will be discussed in LoNAP’s final publication. The preliminary information presented above, however, suffices to indicate the considerable potential of information revealed by the careful investigation of this unjustly neglected facet of the Khinis monumental complex.

The twelfth royal stela

A series of eleven rock-cut stelae, up to 2 m high, showing the king in worship beneath divine symbols and in three cases inscribed with the so-called Bavian Inscription of Sennacherib, overlook the course of the canal from the Khinis cliff (Figure 8). Incredibly – after almost two centuries of archaeological exploration at the site, LoNAP was able to identify the existence of a twelfth so far unrecognised stela, located at the exit of the tunnel constructed by Sennacherib’s engineers in order to allow the canal to pass through a spur of rock (stela no. 12, Figures 9-10).

This technological endeavour was celebrated through the carving of two rock-stelae at the entrance (stela no. 1) and exit (stela no. 12) of the underground canal, thus exemplifying a very typical *topos* of Assyrian royal rhetoric: the commemoration of innovative – and thus symbolically charged – technologies and technical achievements (see also Harmanşah 2013).

The newly found stela at the tunnel exit is so worn and damaged that it had hitherto escaped identification. Its original sculptured surface is entirely degraded, mainly due to the abundant water run-off flowing over the stela due to the topographic conditions, to the extent that no trace of the relief is preserved. Only the arched left side of the stela makes it possible to unquestionably identify this feature as belonging to the

¹³ A preliminary appraisal suggests that about 90,000 cubic metres of limestone could have been extracted from the Khinis quarry.



Figure 9: UAV view of the canal and tunnel through the rock spur and location of the twelfth and first rock stelas.

series of rock-cut stelas. This discovery brings the number of known stelas to twelve. This is undoubtedly not coincidental, since in the stelas the king was represented in adoration under the symbols of twelve deities that can be identified from their symbols as Assur, Anu, Enlil, Ea, Sin, Shamash, Adad, Marduk, Nabu, Nergal, Ishtar, and the Sebetti (Bachmann 1927: 21-22; Reade 1977: 39-41). The same twelve gods and goddesses are also mentioned at the beginning of Sennacherib's Bavian Inscription on stelas 4, 7, and 11 as 'the great gods, who install the lord (and) name the ruler to lead the black-headed (people) all over the inhabited world' (Grayson and Novotny 2014, no. 223: lines 1-2). The new discovery of a twelfth rock-cut stela at the exit of the canal from the tunnel shows that the carving of twelve arched panels with the images of Sennacherib worshipping the twelve great deities of Assyria was part of a fully developed theological programme, which involved dedicating each stela to one of the gods.¹⁴

¹⁴ On the interpretation of the Khinis sculptural programme, see Bachmann 1927; Jacobsen and Lloyd 1935; Bagg 2000: 212-224; Bär 2006; Reade and Anderson 2013: 97-118; Fales 2017; Morandi Bonacossi 2018a: 89-98.



Figure 10: The twelfth rock stela at the tunnel exit.

The Bavian Inscription also includes a description of the rock monuments carved by the king on the Khinis cliff (Grayson and Novotny 2014: no. 223, lines 54-57):

‘At the ‘mouth’ of the canal that I caused to be dug into the mountain, [*I ma*]de six stele[s] (and) I *fashioned* image(s) of the great gods, my lords, upon them. Moreover, I had a royal image of myself expressing humility (lit. ‘one who strokes the nose’) placed before them. I had all of my handiwork that I had undertaken in Nineveh inscribed upon them and I left (them) for ever after for the kings, my descendants’.

Previous scholarship has long debated which of the eleven rock-cut stelas then known were mentioned in Sennacherib’s royal inscription. Whilst the identification of the royal image of the king ‘striking his nose’ in the *labīn appi* gesture with the image of Sennacherib represented in duplicate figures worshipping Ashur and his spouse Mullissu on the Large Panel has long been proposed (Jacobsen and Lloyd 1935: 38-39), an inconsistency has always been noted between the six royal stelas mentioned in the Bavian Inscription and the eleven (now twelve) rock-cut stelas that had been identified on the cliff. It seems very likely that the king’s images described in the inscription are to be identified with the six stelas located in the upper northern part of cliff, above the quarry’s inclined ramp (Figures 3 and 8: no. 6-11). These stelas, towering over the initial part of Sennacherib’s hydraulic system, where the

canal-head was situated, were most likely carved on the cliff face during the use of the quarry, as its floor was progressively lowered as a consequence of the limestone extraction. These stelas, the highest of which (no. 10) was carved approximately 14m above the sloping quarry bottom, and the Large Panel, the top of which is 9.30 m above the present-day ground surface, could most easily have been carved during the early phases of the quarrying activity. The use of wooden scaffolding or ropes by means of which the sculptors might have been lowered from the clifftop to the points where the reliefs had to be carved can of course not be excluded, but seems much less likely. This evidence spotlights how the limestone extraction and the planning and execution of the Khinis monumental complex moved forward together. Furthermore, it emphasises that the creation of massive hydraulic networks across the piedmont belt of the Zagros for the intensive irrigation of the Nineveh hinterland and the supply of water to the new capital was a multi-faceted and carefully planned endeavour. This was commemorated by a royal programme involving on one hand the act of extracting the limestone from the timeless geological depth of the mountain to build Sennacherib's canal parapet masonry together with one of the most impressive royal engineering works in Assyrian history – the Jerwan aqueduct. On the other, the celebration of the profound transformation of the landscape determined by the creation of the regional canal network was conducted simultaneously through the creation of a grandiose, ideologically extremely sophisticated figurative and textual commemoration of the king's deeds and his devotion to Ashur and the other eleven great gods of Assyria who legitimated his rule.¹⁵

The newly discovered riverbank relief(s) at the canal gate

The complexity of this programme is shown also by the substantial new discoveries made by LoNAP in the lower part of the Khinis rock-art complex, namely to the north of the monolith at the canal gate. Here, the face of the long limestone bank below the quarry's inclined ramp was integrated by Sennacherib's artists into the site's royal figurative programme through the creation of at least three sculptured panels located along the cliff (Figure 11).

The first one (Panel A, Figure 12) is now partially hidden by a eucalyptus tree. The surface of the over three metres high cliff face has been almost entirely removed by erosion. The sculpted surface is preserved only in the lower part of the panel near its northern corner for a length of 4m.

Two feet turned southward (left) and apparently wearing close-toed shoes are represented on a ground line located 40cm above the panel's bottom. The panel is bordered by a frame, which is similar to that of the Rider Relief, and was worked so as to create for the sculptor a perfectly upright face. In this way, the lower portion of the panel frame was more deeply recessed. Behind the feet, is located a rectangular object

¹⁵ On this point, see recently Fales 2017: 266 and Morandi Bonacossi 2018a.

decorated with a moulding at the top and three superimposed bands, perhaps part of a seat or a pedestal. The figure was represented standing in front of it.

The fact that unfortunately nothing else is preserved of this carved relief makes its interpretation extremely difficult. The figure portrayed may have been that of the king or the god Ashur, even though in the Large Panel and the rock-cut stelae Sennacherib and Ashur are represented with sandals (and not with close-toed shoes) and their toes are visible. However, due to the poor state of preservation of the surface of the feet, it cannot be excluded that the figure wore sandals. Furthermore, given the subject of the other Khinis reliefs, it seems very likely that also the riverbank reliefs commemorated the king's achievements and his consecration to Ashur.

Although it is not possible to tell very much about the figure depicted along the riverbank in Panel A, the length of the feet (43cm) allows us to evaluate the overall height of the figure to slightly more than 3m.¹⁶ In that case, the entire height of the riverbank cliff face would have been occupied by impressive sculptured panels.

A rock-cut channel flowed along the cliff face at the base of the panel; it is preserved for a length of 6.70m, with a width of 0.40m and a depth of 0.30m (Figure 11). Panel A was therefore closely associated with water. About 30 m upstream, the same channel is preserved for about 10m on a small terrace along the limestone outcrop. This channel, several tracts of which have been completely eroded away and are not preserved today, was fed with water by an abundant karst spring jutting out from the rock about 70m upstream of Panel A. This is most probably one of the feeder channels of Sennacherib's canal that the king describes in the Bavian Inscription, when he states that 'now, I, by the command of the god Ashur, the great lord, my lord, added to it the waters on the right and left of the mountain, which are beside it, and [the waters] of the cities Mesu, Kukkinu, (and) Piturra, cities in its environs' (Grayson and Novotny 2014: no. 223: lines 13-15). The king's hydraulic engineers had collected the water from all the karst springs in the Atrush/Gomel Valley immediately upstream of the monumental complex at Khinis, conveying it through channels into the main canal. The channel flowing at the base of the sculptured Panels C-A must have flowed into the main canal exactly at the canal gate monolith (Figure 11).

About 10m upstream of Panel A, the remains of a second panel carved within a frame have been identified. Panel B too is preserved only in its lower part for a length of 2.80m, a maximum height of 0.90m and a maximum width of 0.80m (Figures 11 and 13).

Unfortunately no sculpted surface is preserved, but the carved frame preserved at the bottom allows us to assess the presence of another panel, which originally was certainly associated with a water channel flowing at its base that has not survived.

¹⁶On the Large Panel, the figure of Sennacherib, which is 6.50m high, has feet measuring 80cm (Bachmann 1927: 8). Using the same proportions, the Panel A figure would have been approximately 3.25m high.

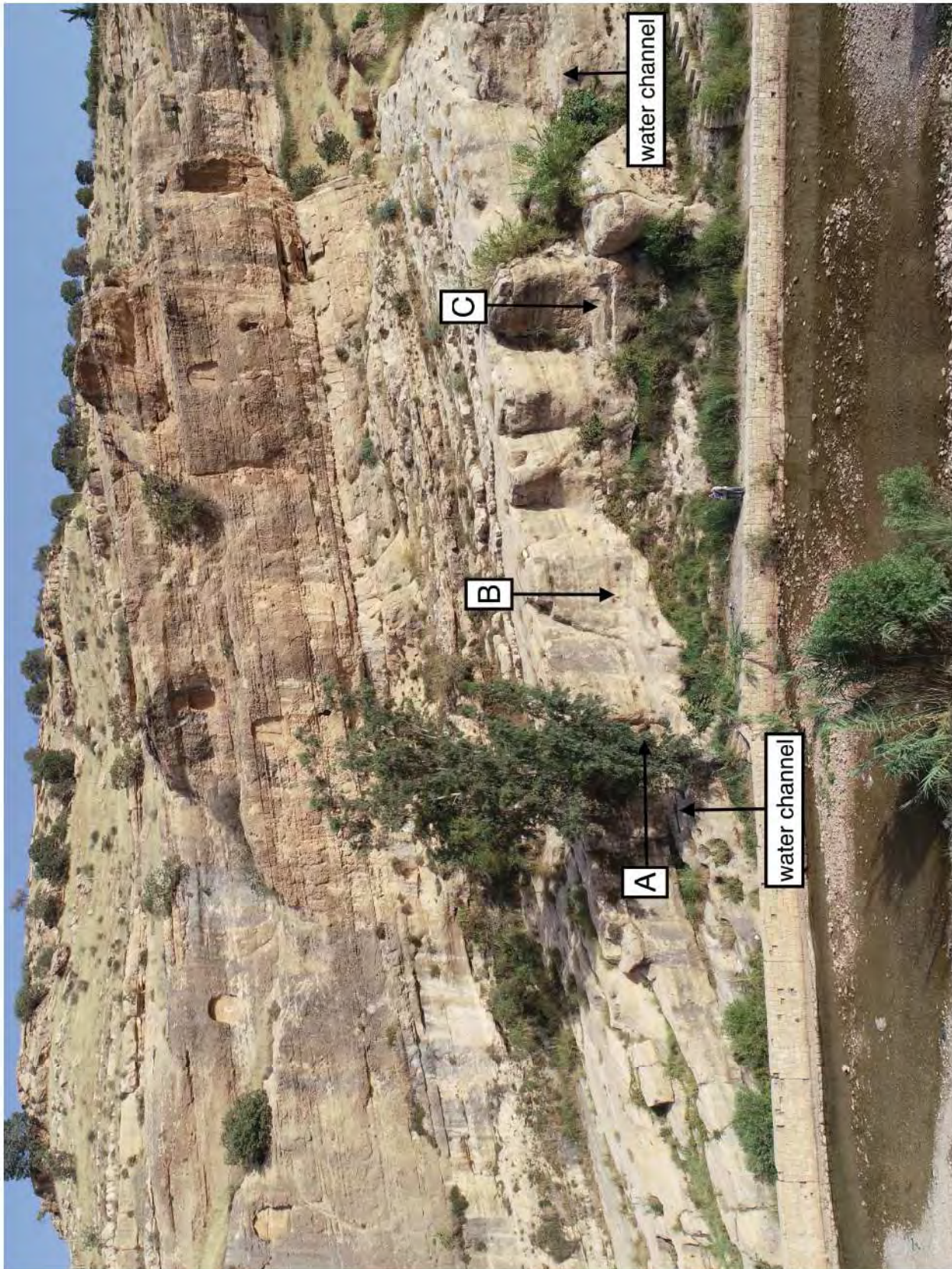


Figure 11: UAV view of the riverbank north of the canal-head monolith with location of the three newly identified sculptured panels (A-C) and the water channel.



Figure 12: Panel A with the remains of the carved relief.



Figure 13: UAV view of Panel B.



Figure 14: UAV view of Panel C.

Finally, a third panel (Panel C) could be detected approximately 15m upstream (Figures 11 and 14).

In this case too no sculpted surface was preserved, but only the lower part of the panel frame. The channel that originally ran at the bottom of the panel was also eroded away in this part of the outcrop overlooking the riverbank.

The pieces of evidence relating to Panels A-C show that the riverbank cliff adjoining the canal gate and its sculptured monolith to the north was carved with at least three large reliefs, only one of which still conserves part of the sculpted decoration. Figures, most likely of the king and the deities, towering from their height of over three meters above the river and the canal-head, were part of a figurative (and perhaps textual) programme that was undoubtedly conceptually and ideologically linked to the other canal gate reliefs, the Large Panel, the Rider Relief, and the twelve royal stelas.

Conclusions

The new evidence collected by LoNAP at Khinis briefly presented here will be discussed in greater depth in the project's final publication. However, this short overview of fresh

field research shows that the Khinis memorial complex was a royal *lieu de mémoire* (Nora 1989; Harmanşah 2018: 491), the complexity of which has not yet been fully investigated. Important new elements, resulting from recent research or the re-examination of hitherto neglected aspects,¹⁷ emphasise the need for a more exhaustive analysis of the site. The use of new techniques of investigation and recording, such as laser scanner survey, digital photogrammetry, 3D virtual modelling, micro-relief recording,¹⁸ UAV survey and digital recording promises significant progress in our knowledge of this astonishing rock-art complex.

A further example of new advances made possible by the use of state-of-the-art technologies may be added to those already presented above. The UAV survey of all rock-reliefs at Khinis has made it possible for the first time to obtain close-range high-resolution images of the sculptural details represented on the different panels. In the case of the Large Panel, horizontal close-ups of the relief taken from a distance of 3-4m instead of with a zoom lens from the Gomel left bank as in the past, have allowed us to identify many important but previously unrecognised features. The most significant of these concerns the long rod held by the goddess Mullissu in her left hand together with a ring inscribed with the figure of the king (Figure 15).

The rod is topped by a palmette with bunches of dates – that had so far gone unrecognised and pomegranates decorating its extremities. What is more important is that the palm-tree trunk is represented by the king's figure in the *labīn appi* gesture.



Figure 15: UAV detail of the Large Panel showing the goddess Mullissu's rod topped by a palmette with bunches of dates and pomegranates and the king as its trunk.

¹⁷ Such as the quarry and its close structural and ideological connections with the creation of the multifaceted memorial complex, the existence of a twelfth (previously unnoticed) royal stela with divine symbols and the presence of a series of sculptured panels along the riverbank leading to the canal gate.

¹⁸ In particular, with regard to the Rider Relief, which was re-carved twice during its history (Bachmann 1927: 16-21; Reade and Anderson 2013: 97-118).

This important symbolic detail too had escaped previous recognition. The symbolism of the goddess' 'rod and ring' lays emphasis on the emblematic association of the king's image – on one hand he is inscribed in the ring, and on the other he replaces the palmette trunk topping the rod – with fertility symbols, such as the palm-tree dates and the pomegranates. In the wider context of a commemoration site erected at the head of a canal, the water of which was meant to make it possible to '[pl]ant around Nineveh gardens, vines, every type of fruit, [...] ..., products of every mountain, fruit trees from all over the world' and to 'provide irrigation annually for the cultivation of grain and sesame' (Grayson and Novotny 2014: no. 223, lines 18-23), the focus on the association of fertility symbolism and Sennacherib's *šalam šarrutiya* (the 'image of my kingship')¹⁹ served to emphasise the creative and fertilising force of the cosmic bond connecting Sennacherib with Ashur and his divine consort. The fertility and agricultural productivity of the country was based on the exclusive relationship linking the king of all goods and the king of all kings. Significantly, in the final part of the Bavian Inscription, after memorialising the construction of the impressive canal network, Sennacherib celebrated the conquest and destruction of Babylon and the submission of its king (Grayson and Novotny 2014: no. 223, lines 34-54).

The new discoveries made at Khinis, in particular the identification of a series of large carved panels probably aimed at eternalising the everlasting bond between Sennacherib and Assyria's great deities in the 'timeless' limestone of the riverbank cliff near the canal gate monolith, add a highly significant piece of evidence to this extraordinary rock complex. In the future, continuation of fieldwork in the area – in particular the trimming of the lush vegetation along both the Gomel riverbanks and the Khinis cliff face, the archaeological excavation of the canal-head area and the investigation of the sculptured monolith base in the river – may lead to the discovery of further important evidence for the interpretation of the Khinis monumental complex.

References

- Adam, J.-P. 1999. *Roman Building: Materials and Techniques*. London: Batsford.
- Bachmann, W. 1927. *Felsreliefs in Assyrien. Bavian, Maltai und Gundük*. Leipzig: J. C. Hinrichs.
- Bär, J. 2006. New Observations on Khinis/Bavian (Northern Iraq). *State Archives of Assyria Bulletin* 15: 43-91.
- Bagg, A. 2000. *Assyrische Wasserbauten. Landwirtschaftliche Wasserbauten im Kernland Assyriens zwischen der 2. Hälfte des 2. und der 1. Hälfte des 1. Jahrtausends v. Chr.* Mainz am Rhein: Philipp von Zabern.
- Bahrani, Z. 2003. *The Graven Image: Representation in Babylonia and Assyria*. Philadelphia: University of Pennsylvania Press.

¹⁹ On this aspect, see Morandi Bonacossi 1988: 105-106; Shafer 1998: 7-8 and 2007; Bahrani 2003: 121-148; Nadali 2012.

- Boehmer, R. M. 1997. Bemerkungen bzw. Ergänzungen zu Ğerwan, Khinis und Faidhi. *Baghdader Mitteilungen* 28: 245-249; Pls. 33-44.
- Coppini, C. 2018. The Land of Nineveh Archaeological Project: Preliminary Results from the Analysis of the Second Millennium BC Pottery. In T. Bürge (ed.) *Proceedings of the 10th International Congress on the Archaeology of the Ancient Near East*: 65-82. Wiesbaden: Harrassowitz Verlag.
- Fales, F. M. 2017. Khinis/Bavian: Changing Models for an Assyrian Monumental Complex. *Ash-Sharq* 1/2: 237-274.
- Gavagnin, K., Iamoni, M., and Palermo, R. 2016. The Land of Nineveh Archaeological Project: The Ceramic Repertoire from the Early Pottery Neolithic to the Sasanian Period, *Bulletin of the American Schools of Oriental Research* 375: 119-169.
- Grayson, A. K. and Novotny, J. 2012. *The Royal Inscriptions of Sennacherib, King of Assyria (704-681 B.C.). Part 1*. RINAP 3/1. Winona Lake: Eisenbrauns.
- Grayson, A. K. and Novotny, J. 2014. *The Royal Inscriptions of Sennacherib, King of Assyria (704-681 B.C.). Part 2*. RINAP 3/2. Winona Lake: Eisenbrauns.
- Harmanşah, Ö. 2013. *Cities and the Shaping of Memory in the Ancient Near East*. Cambridge: Cambridge University Press.
- Harmanşah, Ö. 2018. Rock Reliefs and Landscape Monuments. In A. C. Gunter (ed.) *A Companion to Ancient Near Eastern Art*: 483-505. Medford: Wiley-Blackwell.
- Iamoni, M. 2016. Across Millennia of Occupation. The Land of Nineveh Archaeological Project in Iraqi Kurdistan: The Prehistory and Protohistory of the Upper Tigris Rediscovered. In K. Kopanias and J. MacGinnis (eds) *The Archaeology of the Kurdistan Region of Iraq and Adjacent Regions*: 125-134. Oxford: Archaeopress Publishing Ltd.
- Jacobsen, Th. and Lloyd, S. 1935. *Sennacherib's Aqueduct at Jerwan*, OIP 24. Chicago: Press of the Oriental Institute of the University of Chicago.
- Layard, A. H. 1853. *Discoveries in the Ruins of Nineveh and Babylon*. London: G. P. Putnam and Company.
- Morandi Bonacossi, D. 1988. Stele e statue reali assire: localizzazione, diffusione e implicazioni ideologiche. *Mesopotamia* 23: 105-155.
- Morandi Bonacossi, D. 2014. River Navigation and Transport in Northern Assyria. The Stone Quay-Walls of the Rivers Gomel and Al-Khazir in the Navkur Plain, Iraqi Kurdistan. In S. Gaspa et al. (eds) *From Source to History, Studies on Ancient Near Eastern Worlds and Beyond Dedicated to Giovanni Battista Lanfranchi on the Occasion of His 65th Birthday on June 23, 2014*, AOAT 412: 441-454. Münster: Ugarit-Verlag.
- Morandi Bonacossi, D. 2016. The Land of Nineveh Archaeological Project. Assyrian Settlement in the Nineveh Hinterland: a View from the Centre. In J. MacGinnis et al. (eds) *The Provincial Archaeology of the Assyrian Empire*: 141-150. Cambridge: McDonald Institute for Archaeological Research.
- Morandi Bonacossi, D. 2018 a. Water for Nineveh. The Nineveh Irrigation System in the Regional Context of the 'Assyrian Triangle': A First Geoarchaeological Assessment. In H. Kühne (ed.) *Water for Assyria*, *Studia Chaburensia* 7: 77-115. Wiesbaden: Harrassowitz Verlag.
- Morandi Bonacossi, D. 2018 b. The Creation of the Assyrian Heartland: New Data from the 'Land behind Nineveh'. In B. S. Düring and T. Stek (eds) *The Archaeology of Imperial Landscapes. A Comparative Study of Empires in the Ancient Near East and Mediterranean World*: 48-85. Cambridge: Cambridge University Press.

- Morandi Bonacossi, D. and Iamoni, M. 2015. Landscape and Settlement in the Eastern Upper Iraqi Tigris and Navkur Plains: The Land of Nineveh Archaeological Project, Season 2012-2013. *Iraq* 77: 9-39.
- Nadali, D. 2012. Interpretation and Translations, Performativity and Embodied Simulation. Reflections on Assyrian Images. In G. B. Lanfranchi, D. M. Bonacossi, C. Pappi, and S. Ponchia (eds) *Leggo! Studies Presented to Frederick Mario Fales*: 583-595. Wiesbaden: Harrassowitz Verlag.
- Nora, P. 1989. Between Memory and History: les lieux de memoire. *Representations* 26: 7-24.
- Oates, D. 1968. *Studies in the Ancient History of Northern Iraq*. London: British Institute for the Study of Iraq.
- Palermo, R. 2016. Filling the Gap: The Upper Tigris Region from the Fall of Nineveh to the Sasanians. Archaeological and Historical Overview through the Data of the Land of Nineveh Archaeological Project. In K. Kopanias and J. MacGinnis (eds) *The Archaeology of the Kurdistan Region of Iraq and Adjacent Regions*: 277-295. Oxford: Archaeopress Publishing Ltd.
- Reade, J. E. 1977. Shikaft-i Gulgul: Its Date and Symbolism. *Iranica Antiqua* 12: 33-44.
- Reade, J. E. 1978. Studies in Assyrian Geography. Sennacherib and the Waters of Nineveh. *Revue d'Assyriologie* 72: 47-72, 157-180.
- Reade, J. E. 1990. Carrières et préfabrication dans le monde néo-assyrien. In M. Waelkens (ed.) *Pierre éternelle du Nil au Rhin. Carrières et préfabrication*: 46-52. Bruxelles: Crédit Communal.
- Reade, J. E. and Anderson, J. R. 2013. Gunduk, Khanes, Gaugamela, Gali Zardak. Notes on Navkur and Nearby Rock-cut Sculptures in Kurdistan. *Zeitschrift für Assyriologie* 103: 68-122.
- Rouet, S. 1846. Lettres de M. Rouet sur ses découvertes d'antiquités assyriennes. *Journal of Archaeology* 7: 280-290.
- Russell, J. M. 1991. *Sennacherib's Palace without Rival at Nineveh*. Chicago-London: University of Chicago Press.
- Sachau, E. 1900. *Am Euphrat und Tigris. Reisenotizen aus dem Winter 1897-1898*. Leipzig: J. C. Hinrichs.
- Shafer, A. T. 1998. *The Carving of an Empire: Neo-Assyrian Monuments at the Periphery*. Cambridge: Harvard University.
- Shafer, A. T. 2007. Assyrian Royal Monuments on the Periphery: Ritual and the Making of Imperial Space. In J. Cheng and M. H. Feldman (eds) *Ancient Near Eastern Art in Context: Studies in Honor of Irene J. Winter by Her Students*: 133-159. Leiden: Brill.
- Ur, J. 2005. Sennacherib's Northern Assyrian Canals. New Insights from Satellite Imagery and Aerial Photography. *Iraq* 67: 317-345.
- Wigram, W. A. and Wigram, E. T. A. 1914 [1922]. *The Cradle of Mankind. Life in Eastern Kurdistan*. London: A. and C. Black.