

## **SOME REMARKS ON SARGON II'S EIGHTH CAMPAIGN OF 714 BC**

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The written account of Sargon's eighth campaign provides valuable information about the internal organisation of the Urartian Kingdom. The account, in the form of a letter, describes the campaign trail in detail and a number of scholars have suggested many possible routes which Sargon might have taken (Thureau-Dangin 1912; Meissner 1922; Schroeder 1922; Luckenbill 1927; Wright 1942; Levine 1977; Mayer 1980, 1984; Muscarella 1986; Medvedskaya 1989; Zimansky 1990; Ivanchik 1993). Unfortunately, our lack of knowledge of Urartian geography makes the task of reconstructing the trail extremely difficult, if not impossible. Nevertheless, the text does give us some very useful information about the military and especially, the defensive system of the Kingdom of Urartu.

The purpose of this article is to see what might be learned from the fortifications that were, undoubtedly, destroyed during Sargon's eighth campaign. The site of the fortifications is called Gerdesorah which lies near the modern village of Sufian, close to the border between Iraq and Iran (Kleiss 1976). Kleiss visited the site only once but took careful measurements and drew a plan; this is still quoted today in several works concerning Urartian fortifications.

The Gerdesorah fortifications were built near the Kel-i-šin pass on the most direct route from Assyria to Urartu. Musasir, one of the most important sites in the whole of Urartu, was located West of the pass. Gerdesorah also played an important role in the network of defences, blocking the way to the heartland of Urartu. The site itself is a relatively small fortress, oval in shape and measuring 95 x 81 metres. The position of the fort had been chosen carefully; Gerdesorah is located on the top of a hill which is approximately 55 metres above the surrounding terrain.

The defensive wall of the fort was 2.5 metres thick and a section contains evidence of buttresses and defensive towers. The buttresses are generally

2.5 metres wide and extend beyond the wall by 0.6 to 0.7 metres. The distance between neighbouring buttresses is usually about 8 metres. The towers are much more substantial than the buttresses, being 3.5 metres in breadth and protruding 2 metres beyond the face of the wall.

Gerdesorah was probably not fully completed in time for Sargon's attack. It is possible that its internal features were still being built during the siege. Within the fort, there are only two barracks and the main part of the internal area contained no buildings at all. The absence of buildings leads to the supposition that Gerdesorah was not a place of refuge. Had it been, then, remains of villages would have been discovered nearby but no traces of any settlements of this kind have, in fact, been found.

The construction of the defensive wall is similar to the Hasanlu IIIB fortification (Dyson 1960, 1977). Although the analogy cannot be relied on for a precise dating, as no potsherds were found within the fortifications, we have to fall back on the dating accepted for Hasanlu IIIB. This rather unsatisfactory state of affairs leads us to ask whether we can date the Gerdesorah fortifications more precisely than simply basing it on the similarity to Hasanlu IIIB.

First, the historical background may provide some clues. In 715 BC, during Rusa I's expedition to the Central Caucasus, the Urartian army was soundly defeated by the Cimmerian tribes (Ivanchik 1990). The king himself was forced to flee the battlefield and his *turtannu*, Kakkadana was captured. The Cimmerians followed up their victory by attacking Urartu, probably from the North East, penetrating deep into the kingdom and even attacking the city of Uasi, located West or South West of Lake Urmia.

The resources of the state of Urartu were being depleted by other, internal problems. In the same year, following a confrontation with Assyria on the Mannaen frontier, an uprising in the land of Mannae had to be suppressed (Lanfranchi 1983).

The news of Rusa's defeat was well known at the Assyrian court and Rusa I would have been justified in thinking that Sargon was intent of the ultimate destruction of Urartu. So, it is probably safe to assume that, after the Mannaen uprising, the whole of the Urartian army, or what was left of it, was stationed in an area to the South or South West of Lake Urmia. Sargon himself probably considered that the end of Urartu was close and that it would be easy to defeat such a weak enemy. Certainly in the following year, Sargon did decide to attack Urartu.

As the fort was deliberately located on the shortest route from Assyria to Urartu, it seems safe to assume that Gerdesorah was designed to play an important role in the Urartian kingdom's system of defence. But, there are two vital questions: when was the fortress built and were there other fortresses near Gerdesorah or was it alone in the Kel-i-šin pass?

Three fortresses can be found in a radius of about 20 km around Gerdesorah. The nearest is Kaniki Zar to the North West of Gerdesorah but this small fort could not have existed at the time of Sargon's eighth campaign because it was only erected in 7<sup>th</sup> century BC (Kleiss 1976: 33-34). The next closest is an unnamed fort, situated 8 km East of the town of Ushnuviyeh (Kleiss 1971: 62-63). The fort is dated to 8<sup>th</sup> – 7<sup>th</sup> century BC, so it could have been one of the strong points attacked by the Assyrians during Sargon's times. The last fortified site is Qalatgah (Kleiss 1971: 63-64), a big fortress with traces of the lower city. This site was occupied between 9<sup>th</sup> and 7<sup>th</sup> century BC and must have played a significant role in the Urartian border zone.

As Gerdesorah cannot have been a place of refuge, we can be fairly certain that it was strictly a military stronghold. We may also be justified in assuming that the soldiers, who formed part of the Urartian army stationed in the area, erected the fort.

In fact, our written source tells us exactly when the relatively nearby city of Musasir was, as already mentioned, captured and plundered. As Oppenheim noticed, Musasir must have been destroyed shortly after 24<sup>th</sup> October 714 BC (Oppenheim 1960: 133-147). Such a precise date can be given because the written account of Sargon's eighth campaign mentions an astrological observation, from which, an exact time can be calculated.

Knowing the date of Musasir's destruction and because Gerdesorah probably found itself on the left wing of the Assyrian army, it is reasonable to speculate that our fort was destroyed at about the same time. Clearly, if the fortress that was guarding such an important mountain pass had still been in existence, it would have presented a serious obstacle to the Assyrians.

If we accept that Gerdesorah was destroyed after 24<sup>th</sup> October and, assuming that it was never completed, we have a date when the process of construction must have been interrupted. The remaining question is when the process of fortification began. One way to establish a starting date is to determine how speedily it could have been built. The basic information

needed for the calculations is provided by the known architecture of the defensive wall, its length, thickness and the number of buttresses and towers. The perimeter wall was 2.5 metres thick; it contained five towers, each 3.5 metres in breadth and extending from the main structure by 2 metres. There were also two larger towers associated with a 4 metre wide gateway. Both these towers were 4.5 metres broad and protruded 0.7 metres beyond the defensive wall. Additionally, we have eighteen buttresses, placed at approximately 8 metre intervals. To summarise, over the whole length of the defensive wall, we can find seven towers and eighteen buttresses.

Because the plan of the fort is almost round, it is possible to say that the wall was 250 metres long (Gerdesorah measured 95 metres East to West and 81 metres North to South). This means the area covered by the wall is 600 square metres. Adding the buttresses and towers to this figure gives us an area of 684.5 metres.

We need to know the height of the wall. Because the defensive wall was built mainly of mud bricks, its face cannot have been truly perpendicular. Instead, especially when a wall is erected on a slope, as in the case of Gerdesorah, one of the faces has to be inclined a few degrees from the upright. The indications are that the wall leaned inwards by not more than three degrees, meaning it cannot have been higher than 7 to 7.5 metres. That would also correspond with the usual relationship between height and thickness of 3 or 4:1. Approximately 201,300 mud bricks are needed to build such a wall to seven metres in height or approximately 215,600 to take it to 7.5 metres. The size of the bricks has been taken as being the same as those used for the Karmir Blur citadel which measure 0.35 x 0.52 x 0.15 metres (Forbes 1983: 18). It takes 42 bricks to construct 1 cubic metre of such a wall. If we take 7.5 metres as the height of the Gerdesorah wall, the total volume equates to 5,134 m<sup>3</sup> or, if the wall was 7 metres high, 4,792 m<sup>3</sup>.

If the number of bricks is known, the length of time it took to produce them can be assessed. According to Wulff (Wulff 1966), who observed the process, it is possible to mould 1500 to 2000 mud bricks a day but this estimate must have been based on much smaller bricks than those at Gerdesorah and can, therefore, be discounted. Bieliński's observations (Bieliński 1985: 61) are much more suitable for our purposes; he estimates an hourly production rate of only 18 to 20 mud bricks, giving a daily output of 160 mud bricks. A brick-making team usually comprised

four people. To make the 201,300 mud bricks needed to build a defensive wall 7 metres high, 1258 team working days would have been required.

Another question is how long it took to erect Gerdesorah's defensive wall. According to Mallowan (Mallowan 1966: vol. 1, 53), who observed the process during construction of an expedition house in Nimrud, a bricklayer can lay 100 mud bricks per day. The bricks used in that house were of a similar size to neo-Assyrian bricks, in turn, approximately the same size as the bricks used in Urartu. This time, there is also an ancient source, a neo-Babylonian text from Uruk, published by Ebeling in his "Neubabylonische Briefe aus Uruk" (Ebeling 1930-1934: vol. 3, no 240 (K.40)) to support the modern estimate. From it, we learn that a bricklayer could lay 110 bricks a day. If we take that figure as the daily norm, construction of the defensive wall occupied 1830 working days.

The speed with which the wall went up obviously depends on the number of people employed; my own judgement is that there were no more than 500. As is widely known, mud bricks need to be dried in the sun for approximately 14 days. Dividing the 500 workers into teams of four gives 125 teams. Each team can form around 160 bricks a day, giving a total daily production of 13750 bricks. In this, production of the total number of 201,300 bricks took only 14.5, say 15 days. Once the moulding process was complete, construction could commence. Dividing the 500 workers into two man teams, actual bricklaying may have taken 7.32, say 7.5 days. To summarise, the mud brick wall could have been built in twenty-two and a half days.

Of course, the mud brick wall was not the only part of the defences. Similar to Hasanlu IIIB, the lower part of the wall was built of stone. In detail, the wall was faced on both sides with limestone blocks and filled with small stones, compacted mud, dirt and rubble. This is a quick construction method, probably very similar to building with bricks in terms of time. We may imagine that the lower, stone faced part of the wall was no higher than 0.5 metres which, with 500 people working on it, would not have taken longer than a day for preparation of materials and a further day for erection.

The thesis can be supported by calculating the number of stone blocks and the volume of the core filling. Taking 0.5 x 0.5 x 0.5 m as the size of the stone blocks and assuming these were used to face both the inside and outside of the lower section, 151 m<sup>3</sup> were needed at Gerdesorah. The core of mud, earth, small pebbles and stone waste amounted to 209 m<sup>3</sup>.

Thanks to an observation made at a quarry in Syria, where 15.5 man hours were needed to extract 1 m<sup>3</sup> of stone (Bessac, 'Abdul Massiah, Valant 1997: 159-197), we can estimate that 2,340 hours were required to prepare the stone blocks.

Assuming that the labourers worked an eight hour day, the core of the wall was probably made in around 750 hours. That estimate is based on the daily norm for earthworks taken from text M288 found at Mari (Charpin 1993: 193-203) from Third Dynasty of Ur texts published by Goetze (Goetze 1962: 13-16). The norms were similar in both cases and 2.25 m<sup>3</sup> of earth per day has been taken for this estimate.

The speculation can be summarised as follows. Construction of the lower section of the defensive wall occupied 3090 hours or 386 eight hour working days. Continuing with the same supposition that 500 people were employed, the lower section took less than a single day's work (0.77 of a working day), because in the neighbouring area stone blocks were relatively easy to gain. Now, adding together the time involved in both the upper, brick portion and the lower, stone portion, we can conclude that it is possible that fortifying Gerdesorah could have been achieved in 24.5 or 25 days.

Does this mean construction work at Gerdesorah started approximately 25 days before 24<sup>th</sup> October 714 BC? It seems unlikely because, during that time, the Assyrian army was conducting operations on Urartian territory. In such circumstances, it would not have been possible to continue the work of fortification at Gerdesorah at the rate suggested above. So, when did construction begin?

As already remarked, the army was stationed in the South or South-western part of the Urartian kingdom from at least 715 BC and Rusa I might have anticipated that the Assyrians would attack Urartu in the following year.

We know that Sargon's army left Kalhu in July 714 BC. The distance between Kalhu and the Kel-i-šin pass is approximately 190 km, so the Assyrian army would have needed at least ten days to make the journey. It is clear that construction work at Gerdesorah could not have begun after Sargon had given the order to march as, taking 25 days, there would have been insufficient time. Much more likely, building work started shortly before Sargon's campaign, probably around the second half of June 714 BC. At that time of year, better, drier weather is usual and the moulded mud bricks would have dried faster than in the spring when it is generally rainy

and wet. Also, we should not forget that Rusa I was expecting an Assyrian attack and might already have had information that the Assyrian army was concentrating in Kalhu. If this is so, he might well have ordered Gerdesorah to be fortified between June and July 714 BC.

Again, it has already been mentioned that Gerdesorah's position near the Kel-i-šin pass, the shortest route between Assyria and Urartu, is strategically significant. Because the work of fortification was done when the threat from Assyria was becoming acute, the walls must have been erected as quickly as was possible. The plan of the fort, itself, supports the contention that speed was of utmost importance; it was built on a hill and was oval in shape. That shape gave the most advantageous relationship between the area inside the fortress and the length of the defensive wall. This factual evidence certainly does not contradict the suggestion that work could have started in June or July.

We know that the route through the Kel-i-šin pass is the shortest way into Urartu. Why, then, did Sargon not take it? It seems incredible that he was much concerned by such a small fortress as Gerdesorah, especially as it was incomplete. The campaign opened by Sargon marching through Upper and Lower Zab, which he crossed in three days. He then halted at the Mount Kullar pass and then decided to approach Urartu taking the longer route, through Kermanshah. In my opinion, the answer is to be found by looking closely at the first two days of the campaign. Once Sargon had crossed Upper Zab, he could have turned to Arbil and, from there, continued through the Kiruri pass, Rawanduz, the Kel-i-šin pass and, thence, via Gerdesorah into the region to the South West of Lake Urmia. But, Sargon did not do so, probably because the Urartian army expected the attack to be conducted exactly in that way and had prepared defensive positions in the Kel-i-šin pass. It is certainly feasible that Assyrian spies, in place within Urartu before the order to march was given at Kalhu, could have forwarded such information. Breaking through a mountain pass with well prepared defences is a risky venture and, for that reason, Sargon chose a different way, marching further South to cross the mountains near Sulaimaniyah and Kermanshah. The decision was a costly one; the distance was greater and he had to find a way across the mountains at another place which caused delays to his plan. Having begun the campaign in July, it had to be finished by October or the army might be caught in a trap when the mountain passes became blocked by snow; lack of time forced him to abandon any attempt to take Tušpa, the Urartian capital. There is

good evidence that the possibility of entrapment did, indeed, worry him as he decided to return to Assyria from the lands of Gilzanu that lie on the way to the heart of Urartu. On the way through, Musasir was captured and Gerdesorah was destroyed.

To conclude, Gerdesorah could have been built between June and July 714 BC. The construction methods dictated that not more than 500 people could work on the job and the time needed to complete the defensive wall was not more than 25 days. This means that construction activity could not have begun after Sargon left Kalhu as the Assyrian army could have reached the stronghold within ten days which would have halted the work. The fact that Gerdesorah was being built in response to a specific Assyrian threat indicates that the fort was part of an Urartian system of defences and may have been integral to preparations to defend the Kel-i-šîn pass.

The well prepared positions in the mountain pass may have been the reason for Sargon's change of mind to cross the mountains via Sulaimaniyah and Kermanshah rather than through the Kel-i-šîn. That decision removed the possibility of action against the centre of the Urartian state, leaving the Assyrians only able to attack regions to the near South and West of Lake Urmia.

The fact that Sargon's army did not venture through the Kel-i-šîn pass, as had been anticipated, forced the Urartians to withdraw from their defensive positions near Gerdesorah and prepare new defensive arrangements to the South or West of Lake Urmia. That would explain why Gerdesorah was not fully completed by the time Sargon attacked Musasir shortly after 24<sup>th</sup> October 714 BC. Possibly, only a small garrison remained at Gerdesorah, slowly preparing the fort in case of siege. Construction had, probably, begun in June/July and destruction came after 24<sup>th</sup> October 714 BC although, we cannot exclude the possibility that Gerdesorah was built earlier than June/July 714 BC.

That date represents the latest possible time that construction could have begun. An earlier date is possible, perhaps during the autumn of 715 BC when, as already mentioned, the Urartian army had probably been stationed to the South or South West of Lake Urmia. If so, construction may have been interrupted by the winter, restarted when the weather improved and abandoned when the Assyrians attacked Urartu.

It hardly matters whether the fortress at Gerdesorah was built in autumn 715 BC or in June/July 714 BC; whichever, it was destined to be one of



the shortest lived fortresses in Urartu. But, during its brief existence, the fort played a crucial role, saving the heart of Urartu from an Assyrian invasion that could have brought about the final destruction of the Urartian state.

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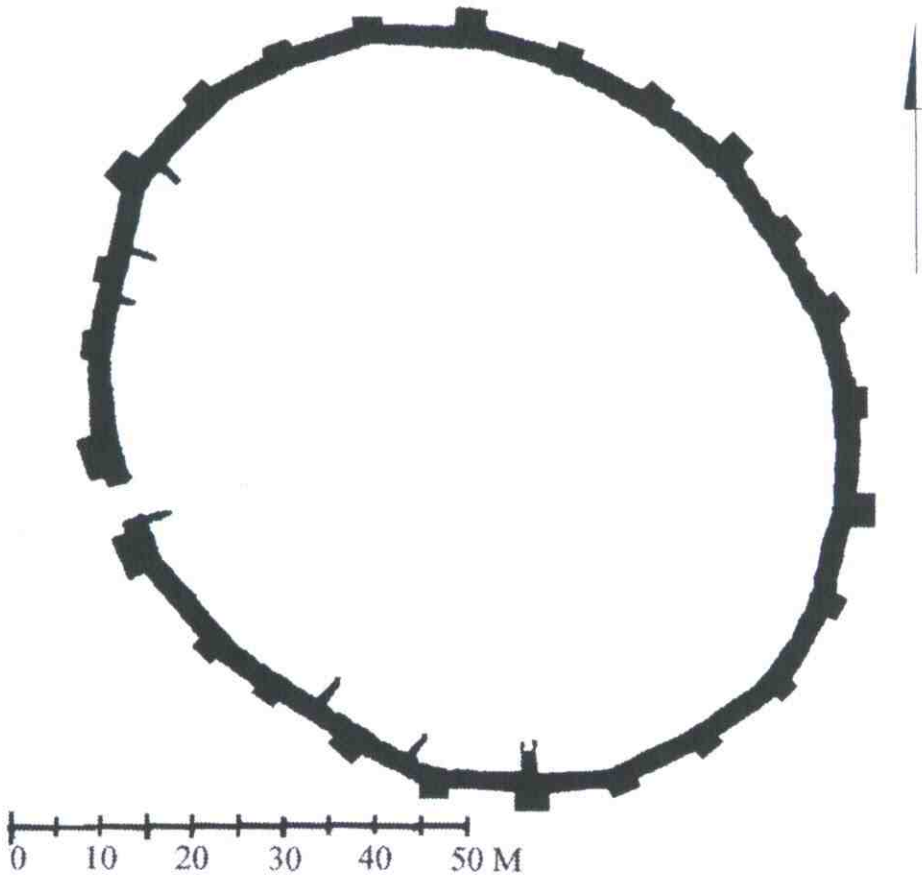


Fig. 1. Gerdesorah Plan, according to W. Kleiss, *Urartäische Plätze im Iran* (Stand der Forschung Herbst 1975), *Archäologische Mitteilungen aus Iran* 9, 1976, 24-26.

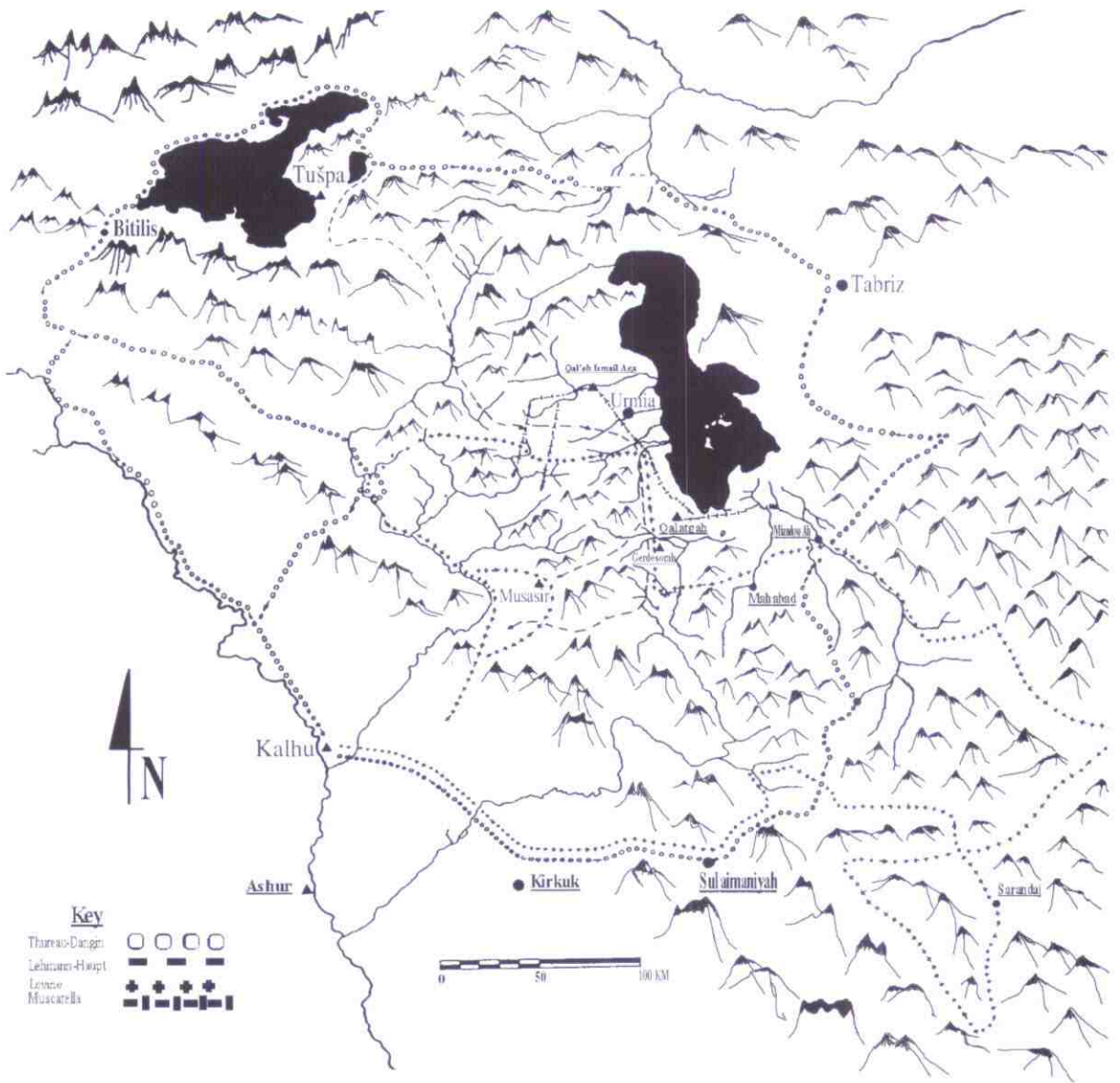


Fig. 2. Supposed Sargon's routes during eight campaign from 714 B.C., according to P. E. Zimanski, *Urartian Geography and Sargon's Eight Campaign*, *Journal of Near Eastern Studies* 49, 1990, 1-21.

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