

A Kushan military camp near Bactra

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The full aerial photographic coverage of the Bactra oasis has led to several new discoveries, including 7th cent. octagonal Buddhist monasteries,¹ or planned settlements. One of them, Zadiyan, is especially interesting due to its huge dimensions, its perfect grid plan, and its location right to the north of Bactra, on the fringe of the desert separating the oasis from the Amu Darya (Fig. 1).

North of the village of Zadiyan, a square citadel (37°02'47 N, 66°56'42 E) of ca. 6 ha, Kafir Qala or Zadiyan Qala (Fig. 2) overlooks a plain irrigated by many small channels. Its northern limit is marked by an impressive 4 km long rectilinear wall, quite well preserved and clearly separating the agricultural land from the desert, running along the edge of the alluvial fan of the Balkhab (Fig. 3). At its eastern end, this wall turns a perfect right angle to the south, running some additional 1.3 km (Fig. 4).

The various Zadiyan buildings were investigated twice previously. In 1948, Marc Le Berre, the architect of the Délégation archéologique française en Afghanistan conducted a survey at Zadiyan and drew a map of the Zadiyan region with a plan of the citadel (Fig. 5) as well as of several other buildings, including a *tepe* to the west of the citadel, Pit Qala, and a stupa south of the citadel. This survey was never published as such but its results were incorporated into Warwick Ball and Jean-Claude Gardin's *Archaeological Gazetteer of Afghanistan*.² The second survey took place in 1973. It was conducted by Galina Pugachenkova with a Soviet-Afghan team. The citadel was surveyed but it was mainly the long wall which was the focus of the expedition in Zadiyan. Indeed, G. Pugachenkova demonstrated that the Zadiyan wall was included in the wall of the oasis, which the Soviet-Afghan team followed all along the western half of the alluvial fan (Fig. 6). The wall in Zadiyan was, according to her, the best-preserved eastern end of the wall. Some excavations took place on the wall and their results were published (Fig. 7).³

¹ La Vaissière & Marquis 2015; our sincere thanks to N. Sims-Williams for correcting the English.

² Ball & Gardin 1982: 28 (fig. 8: Kafir Qala), 145 (fig. 520: oasis wall), 202 (814: Pit Qala).

³ Pugachenkova 1976: 137-140.

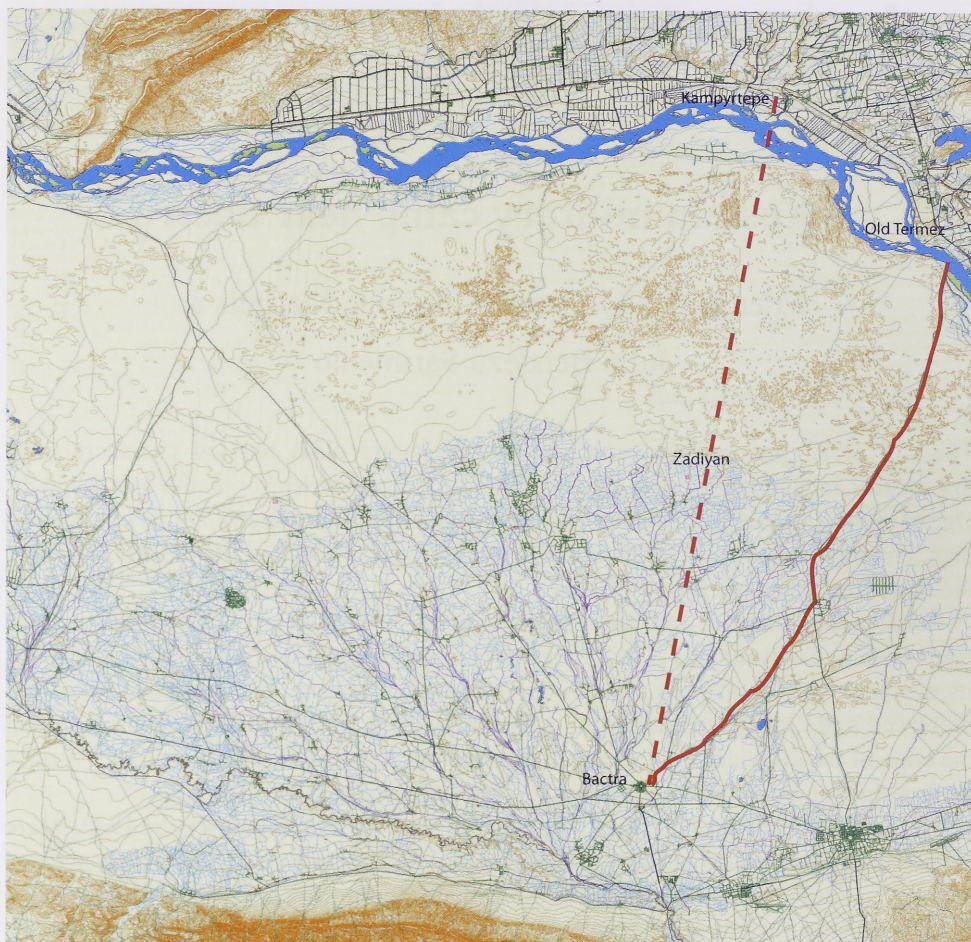


Fig. 1: Map of the oasis (© Ph. Marquis).

However, some features differentiate the wall in Zadiyan from the remaining oasis wall, a fact which might have raised some doubts on the interpretation of the Zadiyan wall as essentially a section of the oasis wall: the Zadiyan wall is much better preserved than the oasis wall. Some parts are still standing to a height of 7 m, while elsewhere the oasis wall is usually barely visible in the landscape. It seems as if the wall was much more powerful, or more recent, or rebuilt, at Zadiyan. It is also perfectly linear while the oasis wall usually followed the variations of the relief, and its eastern end is angular, a feature not seen elsewhere.

However the most striking feature could only be discovered from the detailed aerial photograph, now easily available: the key point of the interpretation is the fact that this well-preserved linear part of the wall, both in the north and in its eastern extension, is



Fig. 2: View of the citadel at Zadiyan from the north-east (© R. Besenval).

centred on the citadel. The two parts of the wall are parallel to the sides of the square citadel and its western end and its eastern angle are symmetrical on each side of an axis running through the citadel, with 2.04 km between each end and the middle. The distance separating Pit Qala from the citadel is also the same, as is the distance from Pit Qala to the western end of the northern wall, creating a perfect square (Fig. 8). Nothing can explain these symmetries except for a single defensive project, i.e. the wall, the citadel and Pit Qala were planned together.

But Zadiyan was, nonetheless, part of the oasis wall: Pugachenkova has demonstrated beyond any doubt that the Zadiyan wall was integrated in this global wall and the aerial photographs confirm the connection: at its western end the Zadiyan wall is prolonged by a much lower wall, which runs obliquely all the way to Aqsha, i.e. the oasis wall. The very different shape and state of preservation of the Zadiyan part of the wall prove that the builders of the oasis wall made use of a pre-existing wall at Zadiyan and integrated it in their global system, or conversely the builders of Zadiyan citadel made use of the oasis wall, reinforcing it north of the citadel. Only this hypothesis of two stages of wall building at Zadiyan, in whichever order, can explain the difference from the other parts of the oasis wall.



Fig. 3: The wall of Zadiyan, seen from the desert (© Ph. Marquis).

This deduction is confirmed by several other symmetries.

A look at the aerial photographs shows that the numerous channels, field limits and paths surrounding the citadel form a perfect grid around it (Fig. 9). Not all of its subdivisions are preserved but the grid is still clearly visible. The citadel stands at the centre of a huge modular plan. Immediately round the citadel a square space was left bare of subdivisions. The module of the grid is a small square of ca. 250 x 250 m (Fig. 10). This is also the module of the citadel itself. The capacity of rural landscape to fossilize ancient land demarcations is well known.

The grid itself is square. It stops at the Zadiyan wall, not going beyond it. On the eastern side, it stops not only at the preserved eastern wall, but, to the south of the surviving 1.3 km of that wall, it stops also along a limit exactly in line with this segment, as if the wall would in the past have extended further to the south. An irrigation channel still runs all along this vanished wall. To the west too, the grid stops precisely at clear limits, although nothing in the current landscape explains them (see Fig. 9, especially to the north-west). The south is more destroyed but the grid is still visible at the south-east corner. The only notable feature of these southern and western limits is that they are strikingly symmetrical to the northern and eastern wall with respect to the citadel. The only explanation for this grid, totally different from the usually amorphous networks of channels, field limits and paths elsewhere in the countryside, whether close to Zadiyan or farther away in the oasis, is that it was organized according to the citadel which stands at its centre but also according to limits drawing a huge square around the citadel. The northern and eastern walls seem to be remnants of a complete square wall of ca. 4 x 4 km surrounding the citadel on all sides. Only this can explain the fact that every path or channel comes to a sudden end in such a symmetrical way.

A third symmetry links the western and eastern sides of the global square: Pit Qala would stand in the very middle of the supposed western wall, 2.04 km south of the western end of the northern wall. Indeed, there is still, in front of it, a small fragment

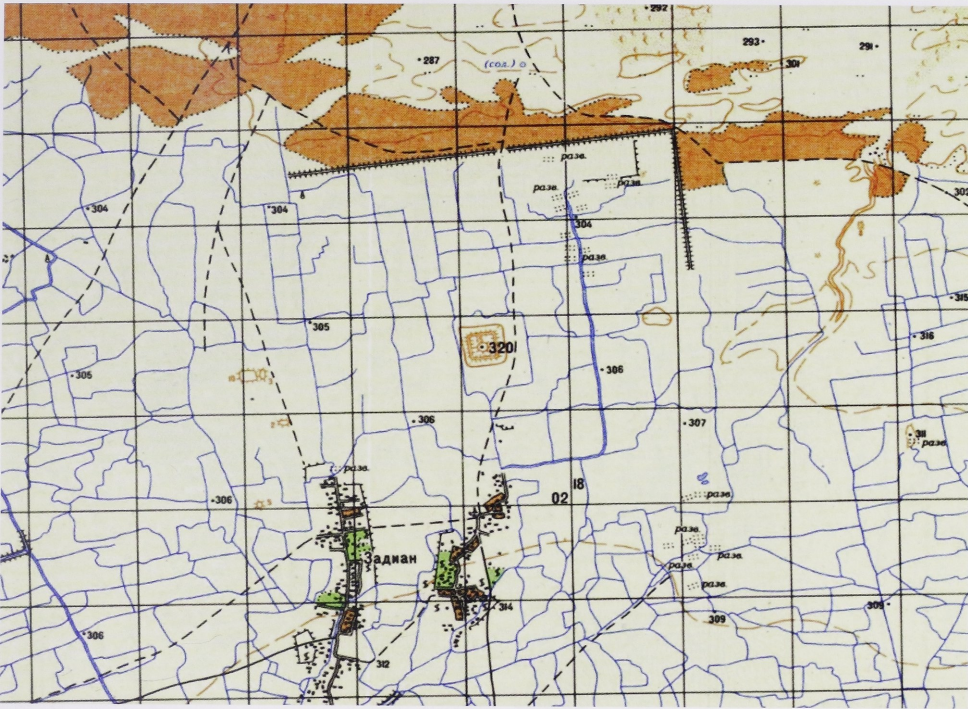


Fig. 4: Soviet map of Zadiyan (© Ph. Marquis).

of wall. This north-south wall fragment stands precisely at the limit of the paths and channels and seems to be a remnant of the missing north-south western wall (Fig. 11). Symmetrical to Pit Qala with regard to the citadel, 2.04 km south of the angle of the surviving wall, in the middle of the eastern side, the micro-relief still shows the former existence of a destroyed building around which the channel skirted. Pit Qala and this building might have been fortified complex entrances to the inner square. The citadel itself has such an entrance, well known in the military architecture of the region during Antiquity, for instance in Khorezm, and still partially extant at the citadel (Fig. 5).

That all the southern part of this huge wall, close to the village, has disappeared is clearly linked with the variation of the watercourses of the Balkhab: the dried-up watercourses are still visible on the aerial photographs all over the area except in the north. A local flood-created fan with a south to north course encompasses the whole of the western wall, except for its fortified central entrance, Pit Qala, while another, with a south-west to north-east course, encompasses the southern wall and the southern part of the eastern wall (Fig. 12).

Thus a huge quadrangular wall, 16.1 km long, of which 5.3 km are still preserved on the northern and eastern sides, together with a small segment at the middle of the western side, once stood at Zadiyan. The wall surrounded a grid, which surrounded a

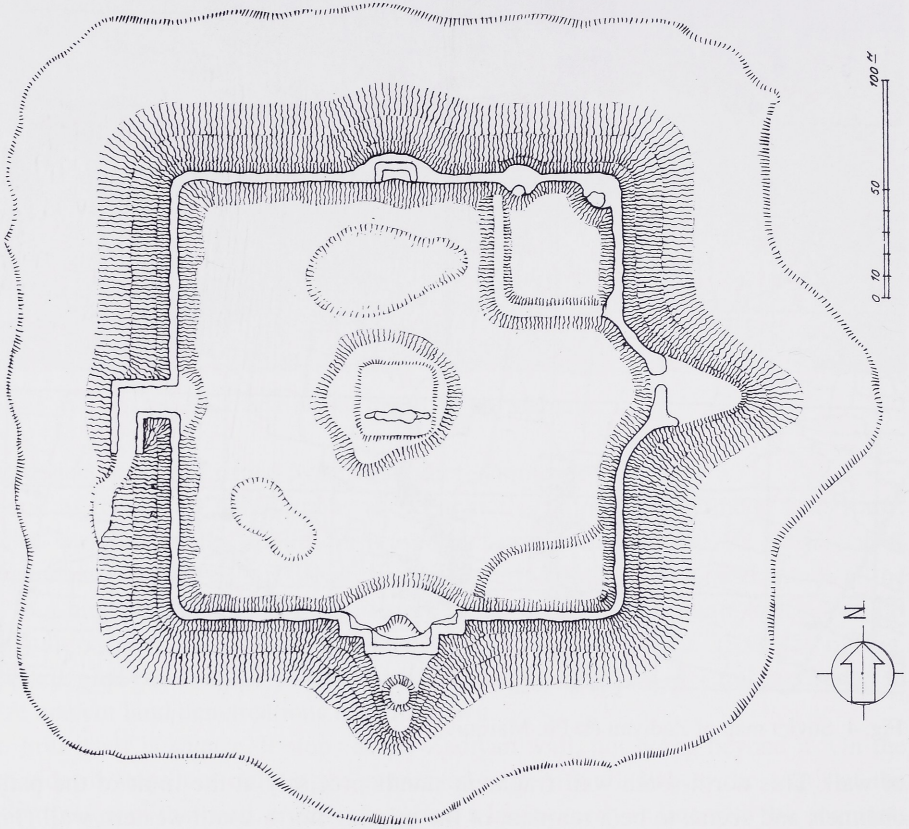


Fig. 5: Unpublished drawing of the citadel, Marc Le Berre, 1948 (© DAFA).

huge citadel. Could this have been an urban settlement? The micro-relief does not seem to favour this idea except in a zone between the citadel and the stupa, although obviously some test-excavations would be necessary to settle this point. Moreover the situation of Zadiyan, at the very fringe of the oasis, does not favour the idea of a 1600 ha town. Most probably the fossilized landscape was already a mainly agricultural one. However, fields are not usually surrounded by huge walls and protected by a citadel. The military function of the whole complex is very clear: the citadel has 12 m high walls, while the northern wall is 7 m high and pierced by arrow slits. The situation, overlooking the desert and, further away, the fords across the Amu Darya, is also more military than purely agricultural.

There is nothing strange in combining agriculture and military features in Antique and Mediaeval Central Asia. A model is close at hand, the Chinese Tuntian 屯田, military and agricultural colonies created all along the areas conquered by the Chinese from the end of the 2nd cent. BC onwards. The soldiers were supposed to cultivate the

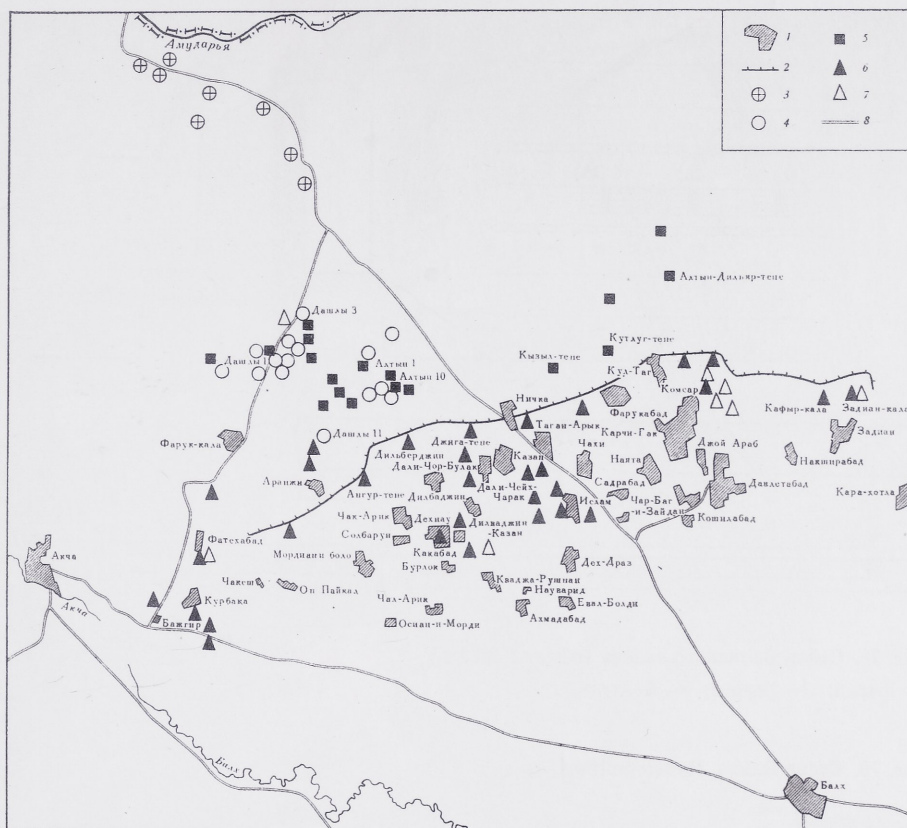


Рис. 13. Археологические памятники в районе Дильберджина (дашлинский оазис)

1 — границы современных поселений; 2 — древняя стена оазиса; 3 — памятники каменного века; 4 — памятники эпохи бронзы; 5 — поселения эпохи ахеменидов; 6 — поселения кушанского времени, 7 — ранне-средневековые поселения; 8 — современные дороги

Fig. 6: Drawing of the oasis wall, after Pugachenkova 1976: 16.

land to provide their livelihood at the same time as defending the region and modifying its ethnic landscape. However, if Zadiyan might be a Western example of the same idea, it did not inherit its shape from a supposed Chinese model, since the Tuntian known from archaeology do not have the same plan.⁴ Functionally, however, Zadiyan might be a Bactrian Tuntian, or maybe a gigantic gathering camp of the Bactrian army in case of known danger from the north.⁵

⁴ My sincere thanks to Arnaud Bertrand for showing me on aerial photographs an archaeologically identified Tuntian at 40°16'04 N 96°15'25 E. The citadel is at the side, the fields are outside the walls and the size is much smaller, a square of 500 × 500 m.

⁵ This interesting possibility was suggested to us by an anonymous attendee at a lecture on this topic at the Collège de France, February 13, 2014.

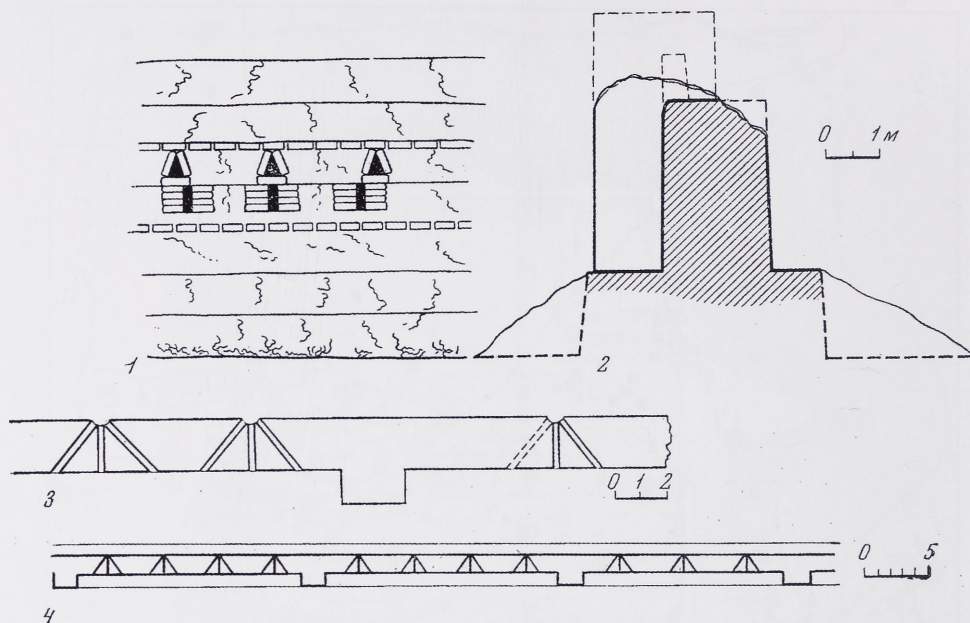


Рис. 78. Стена Балхского оазиса (обмеры 1973 г.)

1— фасад; 2— разрез; 3—4—план

Рис. 79. Стена Балха. Пучок бойниц

Fig. 7: Drawing of the excavations on the oasis wall, after Pugachenkova 1976: 139.

The question of the date of the camp can be approached by two means, by historical reasoning and by technical analysis. In our research, we first elaborated the historical reasoning before turning to the technical analysis, i.e. ^{14}C dating of straws found inside the compacted earth of various parts of the walls and citadel, which happened to confirm entirely the historical reasoning.

In fact, Zadiyan is not a likely place to create a military camp to protect the oasis from invaders crossing the Amu Darya. It is 20 km to the west of the road between Bactra and the crossing of the Amu Darya at Old Termez (Fig. 1, road in red).⁶ That being so, a foe emerging from the desert along this road might have reached Bactra (at 38 km) before being caught by troops sent from Zadiyan (at 30 km from Bactra). Zadiyan is too isolated to be of much use in connection with this road. But the Termez crossing of the Amu Darya — a river with some shifting of islands along its middle course — has not always been the main one. From the Greek period to Kanishka, a crossing at Kampyrtepe, 20 km downstream from Old Termez, may actually have been more important. Although

⁶ The road went through Siahgerd according to the Muslim geographers.



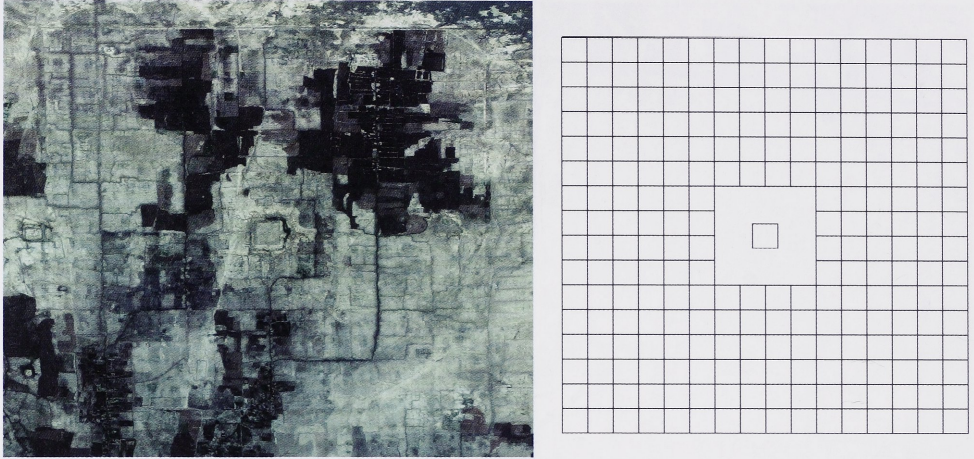
Fig. 8: Symmetries: wall, citadel, Pit Qala (É. de la Vaissière).

Termez is older than Kampyrtepe, it does not seem to have been yet fully developed during this period.

Kampyrtepe is a small but heavily fortified Hellenistic town, which was in use up to ca. AD 150. Its chronology is quite clear due to the numerous coins finds on the spot (Rtveladze 2000). The whole of the southern part of the town may have been destroyed by the river in one of its violent floods — which have been known to reach 7 m — which would explain this sudden desertion.

Zadiyan stood exactly half way along the direct road linking Bactra to Kampyrtepe in Antiquity, the main road to the north (Fig. 1, red dashed line). This strategic location implies that Zadiyan was constructed during the heyday of Kampyrtepe, before the desertion of the town and the shift of the main road to the east in the middle of the 2nd cent. AD.

However all the seasoned archaeologists who have visited Zadiyan agree on the absence of Greek shards on the various sites. Marc Le Berre regarded the ceramics of



Figs. 9 and 10: Aerial photograph (courtesy of DAFA); theoretical grid at Zadiyan. One square: 250 × 250 m (© É. de la Vaissière).

the citadel as Hephthalite, but those at Pit Qala, the western entrance, as Kushan and homogeneous (Ball & Gardin 1982: 202). Galina Pugachenkova wrote that the citadel is Kushan but regarded the northern wall (which for her was the oasis wall) as Hellenistic — this for historical rather than archaeological reasons, the argument being that only a strong power, under Diodotus or Euthydemus, would have been able to create such a long wall (Pugachenkova 1976: 140). Roland Besenval (oral communication) also regarded the ceramic of the citadel as Kushan, with no Greek shards, and so did we when we visited the spot.

The combination of the *terminus post quem* — the ceramics — and *ante quem* — the relationship with Kampyrtepe — would put Zadiyan firmly in the early Kushan period, in the 1st cent. BC or 1st cent. AD.

This rough historical dating, proposed in 2012, was entirely confirmed by our ¹⁴C-analyses. In September 2013, our DAFA team was able to conduct a survey at Zadiyan⁷ and to take five samples of *pakhsa* (compacted earth) and bricks. Four of them included enough straw or wood to be analysed. A fifth one from the eastern wall of Zadiyan unfortunately did not give any result (Fig. 13). One sample was taken from the northern wall, deep inside the *pakhsa* at the foot of the wall, the second from the upper part of the same wall, a whole brick from an arrow slit (as on Fig. 7). A third sample, also a whole brick, was taken from the preserved upper level of the western wall of the citadel, and a fourth was taken outside of the 16 km square, from the *pakhsa* at the foot of a wall clearly extending the oasis wall to the east:⁸ Pugachenkova was not right

⁷ Our most sincere thanks to Nader Rasuli (Afghan Institute of Archaeology) who managed to get through all the administrative problems so as to enable us to conduct this survey.

⁸ These samples were prepared at the ¹⁴C laboratory of the CNRS and the University Lyon I (Centre de Datation par le RadioCarbone) and dated with an accelerator at Heidelberg, according

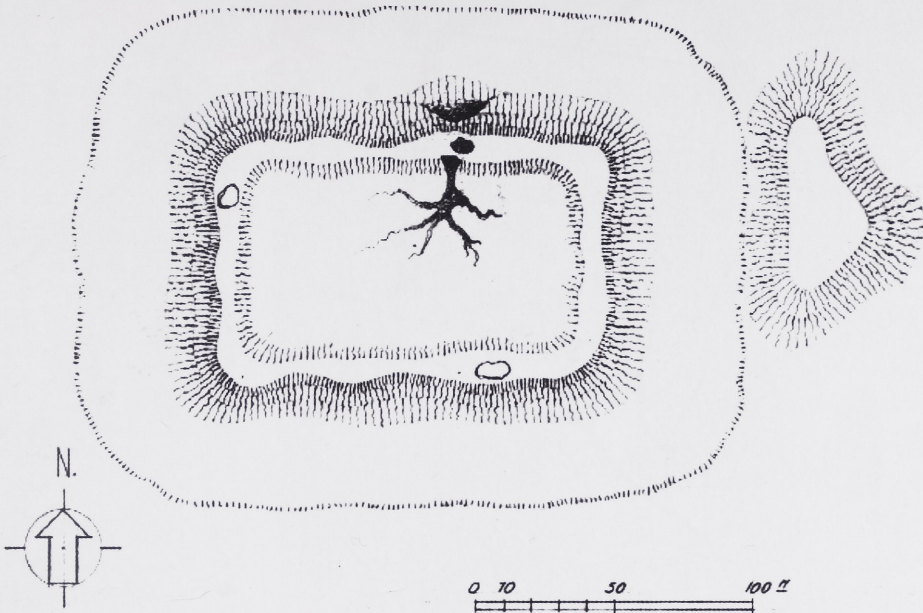


Fig. 11: Unpublished drawing of Pit Qala, Marc Le Berre, 1948 (© DAFA).

in making Zadiyan the eastern end of the oasis wall, which we were able to follow for several kilometres to the east.

The results are:

- sample of *pakhsa* inside the lower part of the wall: 61 BC to AD 76, i.e. early Kushan.⁹
- brick from an arrow slit in the upper part of the wall: AD 222 to 394, i.e. late Kushan or rather Kushano-Sasanian.¹⁰
- citadel: AD 892 to 1031: late Samanid or early Ghaznavid.¹¹
- sample of *pakhsa* inside the eastern extension of the oasis wall: AD 134 to 344, i.e. Kushan post-Kanishka to Kushano-Sasanian.¹²

to IntCal13 atmospheric curve.

⁹ Wood. Age ¹⁴C BP: 2000 ±35, calibrated: 92 BC to AD 76 with 91.9% probability. Laboratory Code: Lyon-11320(GrA).

¹⁰ Straw. Age ¹⁴C BP: 1740 ±35, calibrated: AD 222 to 394 with 95.4% probability. Laboratory Code: Lyon-11318(GrA).

¹¹ Straw. Age ¹⁴C BP: 1055 ±40, calibrated: from AD 892 to 1031 with 95.4% probability. Laboratory Code: Lyon-11319(GrA).

¹² Wood. Age ¹⁴C BP: 1775 ±35, calibrated: AD 134 to 344 with 95.4% probability. Laboratory Code: Lyon-11317(GrA).



Fig. 12: Global schema of Zadiyan (© É. de la Vaissière).

These results clearly demonstrate the existence of two different phases of building for the wall. One of them was early Kushan, the other one late Kushan or Kushano-Sasanian. The upper part of the northern wall and the eastern extension of the oasis wall fall into this second range of dates and Pugachenkova was wrong in assigning the oasis wall to the Greek period. We will discuss this question in another article. As regards the dating of Zadiyan, these results prove that the 16 km² square came first and was later reused, the oasis wall being put on top of its northern part.

The date for the *pakhsa* foundation of the Zadiyan wall, 61 BC to AD 76, is in perfect agreement with the dates deduced from the historical and ceramic evidence. The date of the brick at the uppermost level of the citadel proves that it was repaired at a much later date, as was evident on the spot because of the form of some of the preserved arches, which are clearly Sasanian or post-Sasanian. A Ghaznavid renovation might be linked with the war against the Qarakhanids north of the Amu Darya. But unfortunately the sample does not provide us with the ¹⁴C confirmation that the citadel belongs to a unified Zadiyan project: we should have tried to reach a much deeper level to verify that the date of the citadel is also early Kushan.

All in all the agro-military camp at Zadiyan appears as the final element of the in-depth defence of Kushan Bactria. The northernmost defence was the Iron Gates, then recently rebuilt (Rapin 2013: 64 ff.). Further south comes the heavily fortified crossing

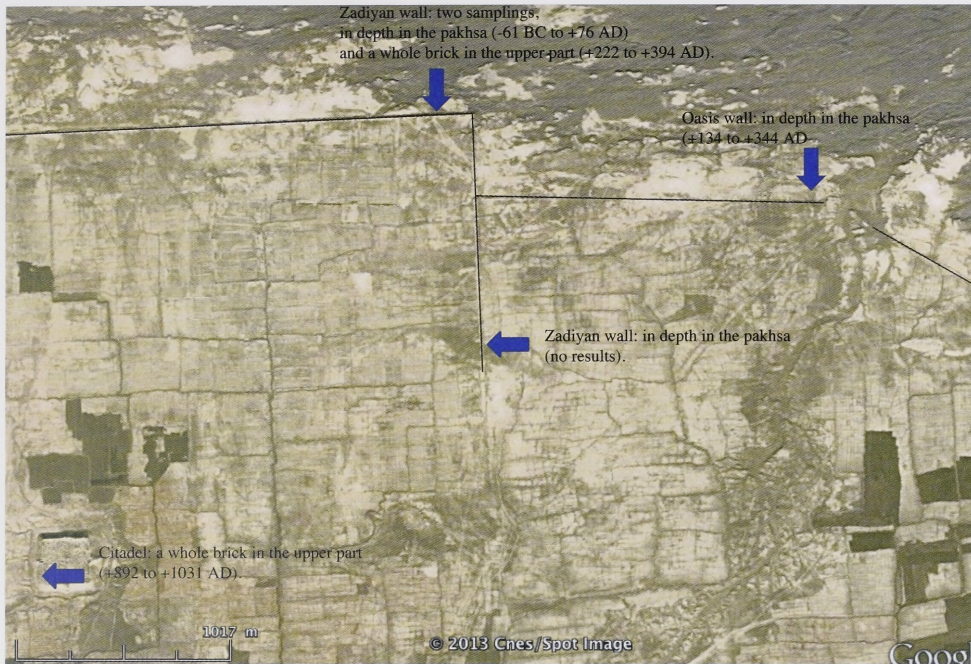


Fig. 13: Samplings (© É. de la Vaissière).

of the Amu Darya at Kampyrtepe, and then, just overlooking the desert, the camp of Zadiyan. These fortifications suggest a difficult relationship between the nascent Kushan empire and the nomadic Kangju confederation to the north.

There is still much to do at Zadiyan: a ^{14}C dating sample from a deeper layer of the citadel would be useful, as well as one from the western entrance, Pit Qala, to back the clearly planned geometry of the whole by a separate dating of its individual parts. Actual excavations might try to verify the existence of barracks close to the citadel. The small stupa, which is probably later, also deserves investigation. For that, we will have to wait for a different political situation.

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