The Darband-i Rania Archaeological Project is one of two new British Museum field projects in Iraq initiated in order to provide a platform for the field training of the Iraq Emergency Heritage Management Training Scheme, a programme funded by the government of the United Kingdom and delivered by the British Museum under the direction of Jonathan Tubb. Following a visit to the Kurdish Region of Iraq in January 2016, during which many possible sites were considered, an application was made to the Directorate of Antiquities of Kurdistan for permission to work at a group of three sites - Qalatga Darband, Usu Aska and Murad Rasu - located close together at the Darband-i Rania pass at the northeastern corner of Lake Dokan (Fig. 1). A major factor behind the choice of these sites was that they offered the opportunity to pursue research along avenues little explored in the region. But an important consideration was that all three sites were subject to significant and ongoing degradation, such that there was an imperative to record and explore these sites at the earliest possible moment. The permit was granted in August 2016 and work commenced the following month. We would like to record our profound thanks to Nawroz Mawlud, Minister for Municipalities, to Mala Awat, then General Director of Antiquities of Kurdistan, to Kaifi Mustafa Ali, his successor as General Director of Antiquities of Kurdistan, to Kamal Rasheed Raheem, Head of the Directorate of Antiquities of Sulaimaniya, and to Barzan Baiz Ismail, Head of the Directorate of Antiquities of Raparin, for their help and support.

Fig. 1 Map showing the location of the Darband-i Rania (inset) and the three sites of the project at the northeast corner of Lake Dokan.

To date the project has conducted four seasons of fieldwork: the first season took place in September-November 2016, the second season in April-June 2017, the third season, scheduled September-October 2017, was aborted after two weeks due to disruptions following the Kurdish Referendum on September 25th 2017, and the fourth season took place in September-November 2018. The team over these four seasons comprised Barzan Baiz Ismael (Director of Antiquities of Raparin), Sami Jamil Hamarashid (representative), Awaz Jihad Heda (representative/ceramicist), Mustafa Ahmad (ceramicist), Fidaa Almehho (cook), Stefano Bertoldi (database specialist), Ricardo Cabral (drone specialist), Raghdah Dagher (ceramicist), Amanda Dusting (archaeologist), Alberto Giannese (photographer), Tina Greenfield (archaeozoologist), Guy Hazell (surveyor), Floor Huisman (archaeologist), Achilles Iasonos (archaeologist), David Kertai (archaeologist), Ewout Koek (conservator), Tom Lyons (archaeologist), Timothy Matney (geophysicist), Bahzad Mohammed (driver), Mathilde Mura (archaeologist), Andy Miller (archaeologist), Kate Morton (illustrator), Virág Pabeschitz (archaeologist), Lucas Proctor (archaeobotanist), Morgan Revels (geophysicist), Christoph Schmidhuber (archaeologist), Mary Shepperson (archaeologist), Mathilde Touillon-Ricci (database specialist), Necmi Yaşar (senior cook), Ramazan Qadir Ismael (cook), Craig Williams (illustrator) and Zozik Sabah Noori (ceramicist).

1 The other site chosen for delivering the field training is Tello in southern Iraq.
The Darband-i Rania pass

The Darband-i Rania - also known as the Darband-i Ramkan - pass lies approximately 8 km east of Rania at the point where a gap between the Kewa Rash mountains to the northwest and the Assos mountains to the southeast allows the Lower Zab to flow from the Peshdar into the Rania Plain. This location now corresponds to the northeast corner of Lake Dokan. The three sites under investigation cluster in this northeast corner: Qalatga Darband dominating the western approaches to the pass on the northern side of the lake, Usu Aska in the pass itself on the southern side, and Murad Rasu on an erstwhile promontory also on the southern side, two km to the west. All three of these sites have suffered severe damage, both from the lake and from other factors, and all three remain critically endangered, with further damage and destruction virtually certain. These considerations alone justify immediate action to investigate and record the remains as they now stand. But beyond this, there was another reason for choosing to explore these sites, as together they present a unique opportunity for investigating the occupation and defence of this strategic pass in the first millennium BC. This report concentrates on the results of the fieldwork at Qalatga Darband.

Qalatga Darband

Qalatga Darband is a large open site dominating the northwestern approach to the Darband-i Rania pass. The location on the shore of Lake Dokan corresponds to what was once a terrace overlooking the northern banks of the Lower Zab; in antiquity the site commanded both the road and the river going through the pass. The strategic importance of the location is obvious, and the sheer size of the site, in excess of 70 ha., reflects a massive investment. Knowledge of the site has however hitherto been very limited. The site was not formally recognised until 1973, when the local historian Abdulraqib Yusuf began to record the various traces visible on the surface. A brief assessment was made in 2013 by Jessica Giraud and the Sulaimaniya Governorate Archaeological Survey, involving the collection of diagnostic surface ceramics, preliminary analysis of which suggested the site had significant occupation in the Seleucid and/or Parthian periods, together with smaller occupations in the Sasanian and also Neo-Assyrian periods; our own, preliminary results suggest that the major occupation of the site is in fact Parthian, a time period hitherto barely explored in this region.

Qalatga Darband is recorded in a variety of satellite images. Most important is a Corona image from February 1960 (Fig. 2). In this image a large square feature is visible south of the main road and immediately south of a track (which still exists) running east-west across the site. The western city wall is also visible, and in addition a number of linear features which may represent walls of structures within the site but which are not sufficiently coherent to suggest actual plans. The site also features in other Corona images, although not with the same level of detail, as well as in sequences from other satellite programmes, for example Quickbird, although once again not with a level of detail of use for understanding the configuration of ancient structures.

Fig. 2 Declassified Corona satellite image, taken February 1960.

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Topographic mapping and surface ceramic survey

The fieldwork commenced with topographic mapping. To date this has mapped everything from the main road down to the lake, and up to (and a little beyond) the western fortification wall, and in the east up to the large farm compound and the industrial area. The remains north of the main road have not yet been mapped. This done, we commenced a programme of surface collection, using the following method. A grid of 100 m squares was laid over the site. At each intersection of this 100 m grid a 10 x 10 m square was laid out and all ceramics, both diagnostic and non-diagnostic, collected. These ceramics were then processed with two objectives: (1) to establish the dating of the site, both overall and in each square: as mentioned, this turned out to be overwhelmingly early Parthian, tentatively assigned to the first century BC; and (2) to gain an insight into the density distribution of the surface scatter. The results were interesting on both counts. Firstly, the overall occupation of the site is uniform, the pottery collected was homogenous with regard to both wares and types, indicating a single major phase of occupation. Secondly, the density distribution did show some clear spikes in internal areas of the sites. It also threw up one more result, namely that the number of sherds outside of the wall on the western side fell off very rapidly to zero, understandably implying that there was no occupation outside of the city walls, at least on the western side.

Fig. 3 Map showing the location of surface collection squares.

Surface Stone Survey

We also carried out a survey of the large shaped stones strewn across the site. Just over 100 pieces were recorded, falling into the following categories: bases and weights from lever presses, carved ashlar blocks, pieces of columns (bases, capital and cylindrical sections), pounding stones and roof rollers. The press bases are particularly distinctive: these are flat stones consisting of a main roughly circular part a little over 1 m in diameter, with a groove all round the edge leading to an exit channel (Fig. 4); six of these were recorded. These are certainly the bases of oil presses and are of a type which is distinctively east Mediterranean3. It is of no little interest that a very close parallel comes from Ai Khanoum in Afghanistan4.

3 Frankel 1999, 132, CD 2 List B Type 463; Waliszewski 2014, 134-7
Another piece recovered from the site and currently in the garden of the Sulaimaniya Museum is a Corinthian capital with volutes either side of an acanthus which again has a close parallel in a capital from Aï Khanoum dated by Bernard to the first half of the second century BC.

Drone survey

Commencing in Season 2, and resumed in Season 4, an overhead drone survey was conducted using a Phantom 4 Pro+ multicopter. Large scale aerial surveys mapped the entire site of Qalatga Darband, which was surveyed at a constant height of 100 m from the ground in one flying session. Approximately 1100 photos were acquired and processed to obtain a detailed orthomosaic of the entire site. Due to the crop cycle at this time of the year (May) it was not possible to obtain a reliable DTM for this area. However, an unexpected bonus was that cropmarks were visible in a number of places. The analysis of these cropmarks was facilitated by processing through DStretch software using a number of different filters (Fig. 5).

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5 Bernard 1968, 114-129.
Geophysical prospection at Qalatga Darband

In Season 4 (autumn 2018) we carried out a programme of geophysical prospection. Ten separate areas were surveyed, together comprising 127 unique 20 by 20m grid squares and a total of 5.08 hectares. All but two of these areas (Areas 4 and 10) were at the site of Qalatga Darband (the remaining two were at Usu Aska). The overarching goal was to provide confirmation or refutation of current interpretations of the overhead (both CORONA and drone) images and to add detail, when possible, to the city plan. This included sections of the city’s fortification walls as well as new architectural constructions not previously documented. The three primary data collectors were: Morgan Revels, Timothy Matney, and Kozhin Sarok. The method employed was magnetometry using a GeoScan FM-256 handheld magnetic field gradiometer.

Fig. 6 Location of Geophysical prospection areas at Qalatga Darband

North Central Group (Areas 1, 2, 3 and 9)

Taken together, these four areas (Fig. 7) are located within 60m of each other in the north central part of Qalatga Darband, approximately 140m south of the main modern road. Area 1 lies to the west of a modern farm and Areas 2 and 3 are within the enclosed farm area. All three of these areas are within a roughly square feature seen on the CORONA images and initially interpreted to be a fortified structure, dated by the ceramics to the early Parthian period. Area 9, located 60m west of Area 1, appears to have some similar features and can be considered to be part of the same overall survey area.

Fig. 7 Geophysical Areas 1, 2, 3, and 9.
Area 1
Area 1 is the largest contiguous area of gradiometry data at Qalatga Darband (1.88 ha) in what was expected to be the western part of the Parthian fort.

![Fig. 8 Results of the magnetic field gradiometry mapping from Area 1 at Qalatga Darband, data only (left) and interpretation (right)](image)

The red lines represent the fortification wall. This appears to comprise a thick wall with three towers or gates on the western edge and one tower on the northern edge. The presence of the fortification wall had already been confirmed by a ground-truthing trench (Area B, see below) laid across the western edge of the square feature seen in the CORONA image. In the gradiometry image, the lines of the wall follow those of the satellite data, except in the south, where in the initially processed dataset there was no clear evidence for a return of the wall: a possible line of the fortification wall on the south is drawn with a dashed line, but this is a low confidence interpretation because of the interference of the modern pathway at the southern edge of the survey area. The yellow lines appear to represent an internal street systems and an external road. The internal streets are long, straight features intersecting at right angles and strongly suggestive of a planned structure. The internal streets divide the interior of the structure into blocks roughly 50m square. The external paths appear to run somewhat irregularly around the structure. Our working hypothesis is that the northernmost tower on the western wall might be a gate structure as the road appears to run into the structure. The green lines represent walls of regularly sized, roughly 5 x 5m rooms, perhaps used for storage. These are found inside the fortification wall and along the edges of the internal streets. The presence of these rooms appears to have also been confirmed in the excavation in Area B, which revealed a double row of rooms just inside of the fortification wall.

Area 2 and 3
Areas 2 and 3 were chosen because they were (1) not significantly built upon, (2) cleared of vegetation, and (3) corresponded with the eastern edge of the building as seen in the CORONA image. We hoped to document the eastern fortification wall and to better understand the nature of the interior of the building in this sector. Areas 2 and 3 are separated by a modern fence although they are close together spatially.
The red line represents the interior of the fortification wall, although the wall in this area is not particularly easy to see in the geophysical data. Approximately 20m to the west of the interior wall face is a possible street, marked in yellow. Between the inner face of the fortification wall and the street is an area with moderately high fluctuations in magnetic readings. This area may represent stone rubble, perhaps the remains of more storage rooms. We think this because we can make out what appear to be 4 storage rooms, roughly 5 x 5 m each, similar to those seen in Area 1, near the southern edge of our survey area. These storage areas might abut either an inner wall that runs up to the fortification wall lengthwise, or they may abut the fortification wall itself.

**Area 9**

Area 9 was chosen for investigation as it is the general location of the concentration of shaped architectural stones. These pieces, all recorded in the surface stone survey, include ashlar blocks, a column base and lever press weights. While it is clear that these pieces are not in situ, even approximately, and that they will have been moved to their present location as part of field clearing in relatively recent times, it remains the case that their original locations cannot have been too far off, with the implication that one or more major building complexes must have existed in the vicinity. This was the reason for investigating the area by geophysical prospection.
The northern section of this area (shown in blue) shows clear evidence of rectilinear architecture. Although the resolution is good, it is difficult to make out complete building plans. The size of spaces (rooms and/or courtyards) ranges from 2 or 3 m on a side, to something of the order of 12m by 5m. There is no clear internal street or passage system, although the presence of long walls stretching 30m from southwest to northeast argues for an organized construction, as opposed to organic growth or agglutinative structures. We would tentatively suggest that this architecture is domestic in nature. It certainly lacks the clear regularity of internal streets seen in Area 1. Dividing the northern and southern areas is a long feature (marked red) with weakly bipolar data. It looks similar to the signals we saw elsewhere from piles of surface stones. The line is very straight, and more importantly it is on the same orientation as the architecture to the north; it is tempting to see this as some kind of large wall structure, although this is more speculative. This may turn out to be nothing more than a modern field boundary. To the south of the possible large wall is an area along the eastern edge of the survey area with rectilinear features that probably represents more domestic architecture. Otherwise, the southern part of Area 9 is represented by a wandering drainage ditch or stream and parallel plough scars. To the south of the drainage ditch there is very little variation in the magnetic field readings. This area looks to be possibly covered in slope wash, eroded, or possibly landscaped or heavily farmed in post-Parthian times. Any future excavation should concentrate on the northern part of Area 9.

**Other geophysical areas**

**Area 5**

Area 5 ("Seleucid Field") was chosen for geophysical investigation as it was the general area where an Achaemenid diorite bowl fragment was found on the surface in Season 1. At that time a 3 x 3 m sounding (Trench F1) was conducted in order to establish whether any significant remains were present. While that trench did not reveal any architecture in precisely that location, the possibility remained that such remains might indeed be detected by investigation over a larger area. This was the reason for the geophysical prospection in Area 5.

![Fig. 11 Results of the magnetic field gradiometry mapping from Area 5 at Qalatga Darband, data only (left) and interpretation (right)](image)

Firstly, two modern features can be seen on the magnetic data. The first is a curving east-west road running from the eastern edge of the northeast corner across the northern half of the survey area. The second is a set of two parallel tyre tracks running north-south from the middle of the northern edge of the survey area until they reach the east-west road. The magnetic gradiometry data shows evidence of a large building (shown in blue) in the central part of the area, delimited by either a large exterior stone wall or a road, or quite possibly both. The building (or buildings) is approximately 55 x 20m in extent, oriented with its long axis running northwest-southeast. It appears to comprise mostly large rooms, except in the northeast corner, where we detected some internal room divisions. To the southwest of the main building, traces of additional walls can be seen forming at least a few rooms, but the resolution of our plans here is imperfect and no coherent plan can be identified.
The other striking feature in Area 5 is a series of four roads or paths (shown in yellow). The three southeast-northwest running roads are not exactly parallel but rather appear to get further apart as one travels to the northwest. For this reason, the large building, bounded on the east and west by these roads is somewhat trapezoidal in shape, rather than a true rectangle. All three of these roads are terminated on their northern ends by the modern roads, so the northern edge of the large building is obscured.

Area 6
Area 6 is a strip across the western fortification wall undertaken in order to investigate whether there was any evidence for a second outer wall (*proteichisma*) or defensive ditch.

![Image](image_url)

*Fig. 12 Results of the magnetic field gradiometry mapping from Area 6 at Qalatga Darband, data only (above) and interpretation (below)*

The operators noted that this area was hard to collect due to the wind storms that occurred during the two days of collection. Nevertheless the data clearly show the fortification wall and an abutting tower (in red). However, there was no evidence for a ditch outside of the wall. There is a depth limit with the magnetic field gradiometry of about 1m, so while this test returned negative results, other methods that can penetrate more deeply, such as ground-penetrating radar (GPR) may be appropriate. Running parallel to the fortification wall about 17m to the southwest is a modern trackway. The road here is about 6m wide, and obscures any possible ancient ditch. To the southwest of the trackway are ploughed fields. The closely-spaced lines of the plough scars, running in a southwest-northeast direction, are clearly visible in the southern quarter of the survey area. While no evidence of a fortification ditch is seen, there is evidence for buildings on the inside of the city’s fortification wall (shown in blue). Small square rooms, possibly used for storage appear to abut the interior of the city wall in at least two places, including immediately opposite the projecting external tower. The corner of a larger building can be seen in the northwestern corner of the survey area. It is possible to delineate a number small rooms within the building.

Area 7
Work in Area 7, on the eastern city wall, was undertaken in order to investigate a large rectangular feature detected in the Season 2 (spring 2017) drone survey. The aim of the prospection was to confirm the existence of this rectangular feature and map any interior architecture there might be.
In the event these aims were achieved decisively, with the mapping of a large structure with a preserved extent of approximately 42 x 50 m, oriented with its long axis running northwest-southeast. The building possibly extended further to east, but any such eastern end was not recoverable due to erosion by the waters of Lake Dokan. The building appears to have comprised an open courtyard in the center with entrances in the southern wall, and perhaps a smaller entrance in the northern wall near the northeast corner. Evidence for small rooms lining the interior of the northern and western walls is clear. These may be storage rooms with dimensions in the order of 5 x 5 m, or slightly smaller. We interpret the plan of the building as also having two ranges of rooms on the north and west, although it is difficult to make out any details of their plan. The southwest corner of the building appears to have an exterior buttress or tower attached to it, although it is difficult to determine its shape. A second projection is also visible, although less clearly, on the northwestern corner. It is particularly striking that this structures appears to have been architecturally isolated. There is no evidence of other buildings to the north, west or south.

Area 8

Prospection in Area 8 (the "Quarry Fort") was undertaken in order to groundtruth an apparent anomaly appearing as a crop mark in the northeastern sector of the site in the Season 2 drone survey. This appeared to show a rectangular feature measuring approximately 38 m square. The aim of the prospection was to groundtruth the presence of this possible structure.
As can be seen in the figure above, there is no evidence in the magnetic gradiometry maps for the presence of any architectural features as found elsewhere on site. A few large pits were located, mostly along the southern edge of the survey area, but it is not possible to say if these are ancient or modern. No linear features representing walls were found in this area of 4,400m². From the geophysical perspective, there is no confirmation of the possible structure seen in the aerial photography. It is possible, of course, that there are walls here and that they are deeply buried or constructed of different materials (e.g., mudbrick), but this seems unlikely.

**Excavation**

Excavation has to date been undertaken in eleven locations (Fig. 17). In Season 1 work took place in Areas A-F, in Season 2 in Areas C, E and G, in Season 3 in Areas E and H, and in Season 4 in Areas E, F, I, J and K.

![Plan of Qalatga Darband showing the location of excavation areas.](image)

*Fig. 15 Plan of Qalatga Darband showing the location of excavation areas.*

**Area A**
Area A, located in the north of the site close to the modern road, was opened up in order to examine some architecture incorporating re-used stone weights and to recover material for dating. Evidence was found for two principal levels. The upper level of the remains breaking the surface turned out to be modern, very likely the remains of tenements built to house workers or equipment for tobacco farming in the 1970s or 1980s. Below this, and separated by a clear layer of accumulated deposits, were the remains of stone wall foundations which, based on a preliminary analysis of the associated ceramics, can be dated to the early Parthian period, ie (probably 1st century BC). The small finds included a fragment of a baked clay archer figurine (QD-602, Fig. 16) and a gold-coloured glass bead (QD-624).

Area B
The aim of the work in Area B was to groundtruth the square structure visible in the Corona imagery. The remains uncovered, which comprised the stone footing for an outer wall 6 m wide and parts of smaller structures on the inside (Fig. 17), together with associated evidence for metal-working and storage facilities, are consistent with a fort. Preliminary analysis of the ceramics suggests that these remains again date to the early Parthian period. It should be noted that fortresses of square design are a typical feature of the Parthian period, with examples found in Iraq at Khirbet Jaddalah (between Hatra and Nineveh), Nippur, Babylon, Kish and other places. While it is not envisaged that the expedition will continue to excavate any very extensive portion of this fort, in Season 4 the interior of this fort was mapped by geophysical prospection (see below) and we do not exclude carrying out one or two targeted excavations of individual rooms in future seasons.

Fig. 16 Fragment of a Parthian archer figurine QD-602

Fig. 17 Plan of the stone wall foundations recovered in Area B.

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6 Bergamini 1987.
**Area C**

The excavations at Area C aimed to investigate the western fortification wall, which runs from the edge of the lake up on to the slopes of the mountains to the north. A 3.60 m stretch of the main wall was uncovered (Fig. 18). It was preserved to a height of 1.30 m and built of large, irregular unworked stones between 20 and 50 cm across laid in rough courses, five of which were fully exposed, with the top of the sixth visible at the bottom of the exposure. The resulting wall face is straight, regular and carefully constructed, with a slight batter. The wall is furnished with rectangular projections at regular intervals. One of these was also excavated. It measured a little under 7 m wide, projecting out from the wall by around 5.20 m. The chamber, which measured 4 m across and 5.10 m in length, was found to be filled with occupation deposits and domestic features, indicating that it was used for habitation for a period of time. There was evidence for two surfaces made of small stones. Into the upper surface were set a small tannur, a baked brick hearth and a large, oval ceramic basin whose fill contained a large quantity of animal bone mixed with stones, potsherds and traces of ash: all these features hint at the domestic activities of the soldiers stationed in the bastion. All the material from the tower chamber dates to the Parthian period with little or no change between the top and bottom deposits. The northern side of the trench was extended eastward in a 3 m wide strip to a total length of 34 m. This was done primarily to investigate a feature on the Corona image which appeared to be a second massive wall behind the first. However, no trace of any such structure was found - if it ever existed, it must have been a shallow construction ploughed away some time after 1960 (when the Corona image was taken).

![Fig. 18 Plan of the architecture in Area C.](image-url)
Area D, in the southern part of Qalatga Darband, was selected for excavation due to the very high concentration of baked brick and roof tile fragments lying on the surface. The goal of the excavations was to investigate the source of this rubble and any associated architecture. Removal of the topsoil revealed a thick level of rubble made of broken baked brick and roof tile in a matrix of broken mudbrick spreading across all trenches. This rubble layer lies directly over the remains of an underlying building with stone wall foundations preserved to just above the level of its white plastered floors (Fig. 19); a dirt fill covered these surfaces up to the height of the walls, and the layer of rubble lay directly on top of both the walls and this fill. Most importantly, the room fills and the standing architecture are devoid of the rooftop or baked brick fragments that typify the rubble. It is accordingly clear that the the rubble layer is not in situ building collapse, but rather that the building was deliberately levelled and the rubble redeposited above these levelled remains. The reason for all this levelling was most likely to create a platform for the construction of the building whose remains are visible on the top of the small mound a few metres to the west. It is difficult to say much about the underlying architecture in Area D, other than that it was a well made building with white plastered surfaces; it seems probable, but has not been demonstrated, that it was of sizeable proportions. The bricks measured 29-31 cm square, varying from 6 to 11 cm thick. The roof tiles comprised both main tiles and capping tiles, and a single fragment of an antefix rosette (QD-706) was also found; the system of tiling is discussed further below.

Fig. 19 Plan of the architecture recovered in Area D.

Area E

Area E is located in the southern part of the site and constitutes a huge stone mound located approximately 100 m east of the city wall. Excavation was undertaken here in order to explore the nature and date of these remains. This operation has begun to reveal a very substantial complex built of stone (Fig. 20). To date, seven rooms have been excavated in whole or in part, together with the external outside of the northeastern facade.
Fig. 20 The plan of the Area E monumental building as recovered by the end of Season 2.

The sequence of layers in the rooms across the building adhere to a consistent pattern. The upper fills of the room consist of stones in soil containing large amounts of completely disarticulated and very fragmented bones, together with jewelry, beads and coins. Directly under this upper collapse is a layer of baked bricks and roof tiles up to 35 cm thick. The bricks measure 28 x 28 x 6 cm. Below this is a dark brown compact clayey matrix of which the upper part may again contain large amounts of roof tiles, charcoal, animal bones, pottery, nails and other pieces of iron. These contexts cannot be collapsed mudbrick architecture as (1) there is no indication that the building utilised mudbrick, (2) they are too homogenous for mud brick collapse, and, most importantly, (3) they lie underneath the terracotta tile roofing collapse. The only possible explanation is that these contexts represent the deliberate infilling of the building. The dating of this action has not been established, but a terminus ante quem is provided by the Sasanian secondary burials. Immediately below this is a supra-floor layer consisting of a very ashy deposit overlying a floor of red clay plastered in white plaster.

There are of course some specific difference to each room.

Room 2
Room 2, which measures 4 x 4.20 m, was characterised by the smashed remains of three large storage jars lying on the floor: these had been used to store white plaster and are one indication that the building was in the process of renovation when it was destroyed. Also on the floor were numerous fragments of sculpture, including an arm (QD-1169), a leg (QD-1210), a wrist (QD-1211), a foot (QD-1241) and the torso of a seated girl (QD-1250). In the middle of the room an offering pit (E-080) was found with plaster trays and green residue at the bottom. At this stage the base of wall was visible and it was observed that it does not have a proper foundation, the stones of the wall just sit on the natural.

Room 3
Room 3 is a rectangular room measuring 8 x 2 m, with niches in the northwestern and northeastern walls. The suprafloor was a thin ashy deposit containing sherds, including parts of two small bowls containing yellow and pink paint, bones and another fragment of an alabaster statue, probably part of a leg (QD-1452). The actual floor
was a matrix of reddish clay and brick fragments. Below this, set between stone features, was another clay-lined pit with a plaster tray on the bottom and a fill containing animal bones.

**Room 4**

Room 4 is a rectangular room measuring 5 x 3.5 m. The upper fill consisted of a stone collapse which overlay a layer of compact, clayey material up to 65 cm thick containing plaster fragments (including many with reed impressions, evidently from the ceiling) and scatters of animal bones. Near the bottom of this layer were further remains of statuary, including an almost complete statue of a young man (QD-1369), as well as the upper part of a foot (QD-1342) and the stump of a tree (QD-1363). These lay just above a supra-floor deposit of black ash lying on a white plastered surface, which in turn sealed an earlier burnt suprafloor with pottery scatters overlying a floor of red clayey material, just as in Room 2.

**Room 5**

This is a room in the middle part of the mound measuring 8 x 4 m. After removal of the stone collapse, the cleaning of the compact deposit of homogenous dark brown clay yielded two small pieces of an alabaster statue, the tip of a penis (QD-1854) and an unidentified part (QD-1855). Other small finds included a needle, iron nails and a large quantity of pieces of blue, white, red and yellow pigment and red painted plaster. On the floor were two heaps of lime powder, covered at the edges by the ashy deposit. A pit was cut into the centre of the room.

**Room 6**

Room 6 (Fig. 21), which measures 2.90 x 7 m is located in the highest point of the mound and has accordingly the highest preserved walls. Under the stone collapse the roof/ceiling collapse contained a huge amount of roof tiles and baked bricks, and also a quantity of iron nails. The layer below contained a large number of small finds, including many small bronze tacks and pierced bronze strips. The architecture of Room 6 contained a number of interesting features, including two nitched recesses and a possible window.

![Fig. 21 Room 6 looking north, with niche E-148 to the right, E-149 to the left, and window E-141 in the north wall at the back](image)

**Room 7**

Room 7 is a room in the southern corner of the building measuring 6 x 6 m, with a square pillar in the centre measuring 3 x 2.8 m. We believe this to be the site of a staircase.
In all of the rooms the plastering of the walls, which show signs of burning, runs up to the upper level of the homogenous brown clay. We now understand this clay to be a deliberate infill. Furthermore, there are changes in the style of masonry above the upper level of this infill. Our current interpretation is therefore that the building was destroyed by fire and that following this event it was deliberately dismantled, leaving a standing height of about one metre. Evidently, the dismantled stones were not thrown into the remaining room spaces but were kept for re-use. The remaining one metre high walls of the rooms were then filled with the clay packing. After this the building was completely rebuilt, using the pre-existing walls as foundations.

**Eastern facade**

During the course of the season we uncovered the massive southeastern outside wall of the building with its façade consisting of alternating semi-circular and quadrangular buttresses separated by regular platforms 1.20 m long, for a total length of about 22m. This allowed us in the process to establish the eastern limits of the building. The occupation level on the outside area is roughly the same level as the recesses between the buttresses of the façade which would have made these alcoves during this period. That these alcoves were used for holding torches or lamps is indicated by the areas of fired clay, and ashy and reddish burnt deposits.

![Fig. 22 The southeastern façade](image)

Inspection of the architectural elements shows clearly that despite the absence so far of an entrance for the later phase, a break (subsequently filled, green in the elevation above) in the stonework of wall E-091 attests to the existence of an entrance at this point in an earlier phase.

**Sasanian secondary burials**

In most of the rooms excavated to date (Rooms 2, 3, 5, 6), the upper stone collapse contained large quantities of disarticulated human and animal bones, in addition to jewelry (particularly earrings), glass, beads and coins. The coins date to the early Sasanian period, specifically to Ardashir I (223-240 AD), Shapur I (240-270 AD), Ohrmazd I (270-271 AD), Bahram II (274-293 AD) and Shapur III (383-388 AD). The only plausible interpretation is that these remains are reburials of skeletons and accompanying grave goods which had been relocated from their original deposition. It is overwhelmingly likely that these are Zoroastrian secondary interments. The animal bones were quite well preserved and show evidence of butchery. Preliminary analysis of these remains (Fig. 23) establishes the presence of an impressively broad range of species, including sheep, goat, cattle, horse, donkey, fallow and roe deer, dog, cat, birds and frog; the absence of pig is striking. The diversity of taxa is impressive for such a small sample. It is of interest to note that an exact parallel for this deposit is found at the site of Shar-i Qumis (ancient Hecatompylos) in northern Iran, where also the
disarticulated remains of burials of Sasanian date are found redeposited in the ruins of a Parthian monumental building.\footnote{Hansman – Stronach 1970, 42-49; Hansman – Stronach 1974, 12-14; Simpson – Molleson 2014, 79.}

![Frequency of animal taxa in the Sasanian reburials.](image)

The Area E building has yielded numerous pieces of sculpture. To date these include two very substantial pieces and numerous fragments.

**Sculpture**

**Statue of a seated female (QD-1250)**

Quarter size statue of a seated female (Fig. 24). White marble of good but not exceptional quality. Preserved height 36 cm, maximum width (across, not including left arm) 20 cm, maximum width (front to back) 22 cm. The sculpture as preserved consists of the complete torso and the upper part of the arms. The head and lower arms have broken off. The legs are also missing but were evidently made as separate pieces, attached by dowels into rectangular cuttings. The figure terminates as seated on a base approximately 18 cm square, roughly rendered on the underside, indicating the statue must have been set into a frame formed by the upper surface of the chair, which was presumably made of wood; the legs must then have extended in front of and below this chair. The figure wears a sleeveless *chiton* (dress). The garment is pulled over the left shoulder, where it was presumably secured, although there is no sign of a carved fibula, brooch or button, but the dress has slipped from her right shoulder, and is caught over her arm, which was originally raised. The folds of the garment are amply rendered, the workmanship is quite hard, with some of the vertical folds appearing rather linear and heavy, appearing like sashes rather than pleats of material. A thin belt runs high around the waist. Apart from the slots for attaching the legs, the statue has six other holes drilled in, located at the back of the left shoulder, between the base of the neck and the right shoulder, in the lower back and on the right hand side of the statue, presumably for attaching accoutrements or to secure the figure to another element or within an architectural setting.
Statue of a naked youth (QD-1169+)
Half life-sized statue of a naked young man (Fig. 25). Fine white alabaster. At the time of writing, the torso found on the floor of Room 4 (QD-1369) has been joined to the left lower leg (QD-1210) and the right arm (QD-1169), both found in Room 2. The right leg, left arm and head are still missing. Both hands and the left foot are also missing, though a right foot (QD-1169) carved out of what appears to be the same alabaster has been recovered. The current height of the statue, from bottom of the lower leg to the top of the upper arm is 86 cm. There are three holes cut into the upper part of the back, again either for the attachment of accoutrements, whether wings or weaponry, or to secure the statue in its architectural setting.
Fig. 25 Statue of a naked male.
Roof tiles

Terracotta roof tiles (Fig. 26) were found in substantial quantities in Area D, where they are part of a levelling fill made from a previously demolished building, and in Area E, where it is clear that they are part of the in situ collapse from the roof of the monumental stone building itself. The size, type and material of the tiles are identical in both areas. They comprise flat tiles (Greek solenes, Latin tegula) and gable-like cover tiles (Greek kalupter, Latin imbrex); there is also one fragment of an antefix. The tegulae have a ridge projecting ca. 4 cm upward on the upper edge in order to hold the tile above in place on a sloping roof. They also have ridges ca. 1.5 cm high set in approximately 3 cm from the edge on each side on the upper face: these provide the frame to hold the imbreces in place - if one puts two of the tegulae next to each other, the imbreces fit on top perfectly. The imbreces themselves have straight sides with a pitched top. Many have a V sign on this sloping top, presumably a workshop sign. None of the pieces recovered to date preserve the whole width of the tegulae; the largest measurement we do have is 38.5+ cm. There are however some complete imbreces. They measure 36-40 cm in length, 12 cm in width, and 8-9.5 cm height, with walls 2-3 cm thick. The antefix is a fragment of a circular piece with a floral design and an original diameter of ca. 12 cm.

These tiles belong to the Corinthian system. Roof tiles have previously been found at Babylon in both the North Palace and at Babil, at Susa both at the Shaur Palace and the "villa à colonnes engagés." The Hellenistic temple at Icaros on Failaka yielded antefixes, and while not a single fragment of ceramic roof tile was found in collapse there, pieces of burnt or fired tile were present in the masonry. At Ai Khanoum roof tiles and antefixes were recovered in the Treasury and in the temenos of Kineas. Missing so far from the assemblage of ceramic roof tiles...

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9 Wetzel, Schmidt & Mallwitz 1957, 24, 26.
10 Ghirshman 1962, 102; Martinez-Sève 2002, 37, 41.
building materials at Qalatga Darband are items such as drain pipes, guttering and vaulting tubes, though there is one surface find (QD-008) which may be part of a terracotta frieze or similar architectural decoration.

Summary of Area E
As far as can be told at this stage, the Area E building was constructed on a virgin site and does not rest on the foundations of previous architecture or other archaeological deposits. The main use of the building came to an end in a fiery event, evidenced by layers of thick ash in all rooms excavated to date. Each of these rooms contained pieces of sculpture which had been smashed and scattered about. It appears therefore that the building was looted and destroyed by fire. The large storage jars containing lime plaster in Room 2, together with the smaller vessels containing paint in Room 3, as well as the upper plaster floor in Room 3 covered by a second ash layer, all suggest that a refurbishment of the building following this clastic event was in progress when a second burning took place. As noted above, the walls of the building were then dismantled to a standing height of approximately one metre, the interiors filled with a clay packing, and the building then entirely rebuilt using these pre-existing walls as foundations. Subsequently, the building was abandoned and collapsed, the dilapidated remains finally being used for the interment of secondary burials in the early Sasanian period.

Area F ("Seleucid Field")
Area F Trench 1 was a sounding carried out in Season 1 at a location where a fragment of a fine diorite bowl (QD-004) had been found during field walking. While no associated architecture was discovered, preliminary analysis of the ceramics recovered indicates that it included fine tableware. The diorite bowl itself has an excellent parallel from Persepolis. In Season 4 the area was chosen for geophysical mapping, with the results outlined above (Area 5). Subsequent to this a new trench, designated Area F Trench 2, was laid out in order to groundtruth the image recovered (Fig. 29). Removal of the topsoil (F-004) came down on to a fill layer of pinkish clayey earth (F-005) containing a large amount of pottery, particularly from storage jars. This overlay in the expected location the base of a wall (F-006) made of irregular stones up to 30 cm long. On the northern side of this wall was evidently a surface (F-007), itself very difficult to identify, but made certain by the presence of a number of large storage jars of orange-pink fabric lying in situ on it. The operation in Area F Trench 2 succeeded therefore in (a) offering groundtruthing support for the interpretation of the geophysical imaging, and (2) producing evidence that this part of the building was part of a storage facility.

Fig. 27 Area F ("Seleucid Field") showing (a) an interpretation of the the geomagnetic plot, with the location of the groundtruthing trench (F2) shown in red, and (b) a view of trench F2, looking north.

Area G

15 Schmidt 1957, plate 57.1.
Area G is a 6 x 4 m sounding located southeast of Area E which was opened up in order to investigate some stone masonry discovered in the course of routine agricultural work. The principal architecture in the trench consisted of what appears to be a wall with an associated walkway, with a maximum width of 1.40 m. The correct interpretation of these remains is not yet clear - whether they are, for example, part of a stoa remains to be seen. There were two significant small finds, a fragment of a lamp with incised decoration (QD 1519), tentatively dated to the late Hellenistic/early Parthian period, and a fragment of a Parthian rider figurine (QD-1500, Fig. 28).

![Fig. 28 Fragment of rider figurine QD-1500, displaying V-necked decoration with arms positioned on the waist.](image)

Area H

Area H is located c. 120 m to the south-west of Area E. Imagery from the drone survey clearly shows what appears to be a substantial feature with concentric walls measuring 37 m square. In Season 3, in order to groundtruth the image and to recover preliminary information on the structure, a 7 x 7 m trench was laid out at the eastern corner. Excavation did reveal, at a depth of 30 - 40 cm, remains of stone walls at exactly the locations expected. Work was however curtailed almost immediately after this due to the disruptions following the Kurdish referendum. One small find of note was recovered from amongst the rubble core of the northeastern section of wall H-003, a gold earring (or pendant) 4 cm in length with a small elongated loop at one end (QD-1900).

Area I

Area I is the site where a trench was laid out across a modern field boundary in order to investigate whether or not this boundary was located above a pre-existing ancient wall. The specific interest in investigating this was as part of the process of establishing the eastern boundaries of the site. Removal of the topsoil (I-001) and subsoil (I-002) came down on to a compact earth surface (I-003) associated with a large amount of slag as well as misfired bricks - from which it appears probable that Area I is in the vicinity of a kiln - but no evidence of a wall in this location. The excavation established, therefore, that, while there were archaeological deposits in this area, the field boundary was not sited above an ancient wall.

Area J (Geophysical Area 7)

Area J is the location of a major structure on the southeastern edge of the site. It was originally detected as a crop mark in the drone survey carried in spring 2017, appearing as a nearly square feature along the eastern wall; the anomaly was not obvious in the Corona image. In Season 4 it was decided to investigate this feature by geophysical survey.
The geophysical results, which were very successful, are reported above. In order to confirm the interpretation of the geophysical plot it was then decided to groundtruth the image. A trench was laid out across the suspected outer western wall of the complex. This was designated Area J (Trench 1). Removal of the topsoil (J-001) came down on to a fill layer of pinkish clayey earth (J-002) containing a large amount of pottery, particularly from storage jars. This overlay in the expected location the base of wall (J-003) running across the trench, 80 cm wide made of irregular stones up to 30 cm long. The operation in Area J succeeded therefore in offering groundtruthing support for the interpretation of the geophysical imaging.

**Area K (Geophysical Area 9)**

Area K was a test trench carried out in order to ground-truth the results of geophysical Area 9, west of the main Parthian fort. The actual site chosen was at the southern end of the suspected complex, in a location where the geophysics suggested there was a more substantial structure (perhaps a gate?) in addition to the walls of the building. Removal of the topsoil of darkish earth containing a large amount of pebbles and ceramics (K-001) came down to a layer of tough pinkish-brown clay (K-002), also containing a large amount of pottery, as well as some glass, slag and a possible coin (QD-2500). After removing this to a depth of approximately 20 cm, towards the southern end of the trench a concentration of large stones (K-003) began to appear. Quite possibly these are part of a structure, but further elucidation was made impossible by the advent of heavy rain. While it seems probable that the general interpretation of the Area 9 (I) magnetometry results is dependable, we will aim to resume the operation here next year in order to complete the process of verification.

**Conclusion**

We finish with some historical reflections. In the site of Qalatga Darband we have a fortified settlement of the early Parthian period defending the western end of the Darband-i Rania. Why was this settlement created, why there, and when was it built?

A first reflection is that a fortified point at this location makes best sense in the context of the early westward expansion of the Parthian empire, specifically the period from when Mithridates I absorbed Media (ca. 149 BC) but before northern Mesopotamia was brought under Parthian control (141 BC at the earliest, possibly somewhat
later). By this model the Darband-i Rania would have been, for a time, the western border of the Parthian empire. The question then is, what state lay to the west? The obvious answer is Adiabene, and we would therefore propose that at the Darband-i Rania we have the eastern border of Adiabene, at least at this time. In fact, even after Adiabene came within the orbit of Parthia, it was as a client kingdom, and the border may well still have been preserved at this location.¹⁶

That said, a further reflection can be made. Even if the genesis of the fortification of the Darband-i Rania lies in the period when the westward expansion of Parthia came up to the pass, it is entirely possible that the use and concept of the installation may have been impacted by subsequent political and military developments. In this regard, the discovery of a grave at Usu Aska with a coin dating to Orodes II (57-37 BC) is extraordinarily suggestive. Orodes II is the king during whose reign the Parthian army massacred the Roman legions at the battle of Carrhae. Was the massive intensification of the defence of the Darband-i Rania undertaken in the wake of Carrhae?

Some support for this suggestion may come from the disposition of the remains at Qalatga Darband. Specifically, why is there a large square fort inside the already fortified zone of the site? A plausible answer could be that the square fort was the original Parthian installation guarding the western approach to the pass, subsequently expanded into the much more comprehensive defensive system represented by the western fortification wall - that is to say that the square fort dates to the mid second century BC (in all events post 141 BC), and the expanded site to a century later (in all events post 53 BC). By this analysis, the expanded fortification of the Darband-i Rania would have taken place in direct response to the rising threat from Rome.

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