# GIRD-I ROSTAM 2018: PRELIMINARY REPORT ON THE FIRST SEASON OF EXCAVATIONS BY THE JOINT KURDISH-GERMAN-AMERICAN TEAM

D. T. POTTS,<sup>a</sup> K. RADNER,<sup>b</sup> A. SQUITIERI,<sup>b</sup> A. AMEEN,<sup>c</sup> J. ROHDE,<sup>b</sup> P. YAWAR,<sup>c</sup> J.-J. HERR,<sup>d</sup>

H. SALIH, <sup>c</sup> F. PETCHEY, <sup>e</sup> A. HOGG, <sup>e</sup> B. GRATUZE, <sup>f</sup> K. R. RAHEEM<sup>c</sup> AND H. B. POTTS<sup>a</sup>

<sup>a</sup>Institute for the Study of the Ancient World, New York University (= NYU);

<sup>b</sup>Ludwig-Maximilians-Universität (= LMU), Munich, Germany; <sup>c</sup>Directorate of Antiquities,

Sulaimaniyah Governate, Kurdistan Region of Iraq; dIndependent Scholar; The University of Waikato

Radiocarbon Dating Laboratory, Hamilton, New Zealand; <sup>f</sup>Institut de Recherche sur les ArchéoMATériaux,

Centre Ernest-Babelon, UMR 5060 CNRS/Université d'Orléans, France

# Introduction (D. T. Potts)

Despite the impressive amount of archaeological research conducted over the last decade in the Kurdistan Region of Iraq, the far eastern part of the Sulaimaniyah Governate, particularly around Penjwin (Fig. 1), has remained largely unexplored. Located close to the Shalar River, Gird-i Rostam is the largest site in the area (Figs. 2-3; about 1.5-2 ha, 15 m high; unprojected LatLon coordinate system, WGS84 datum E 45.915, N 35.753) and Claudius J. Rich is the first recorded Western visitor to the site. Setting out from the village of Bistan<sup>1</sup> on 2 August 1820, Rich visited the ruins of a brick structure on a nearby rocky hill (Qale Bistan) which afforded a fine view of the valley. Proceeding onward, he wrote, 'At a short distance from the foot of the rock is an artificial mount of a circular form and flat top, like those of Tchemtchemal, Derghezeen, &c. It is called Rustum's Mount' (Rich 1836, 177). Subsequently, several travellers to Kurdistan made brief references to Bistan and Penjwin (e.g. Clément 1866, 222, 225; Soane 1912, 938; Banse 1919, 237), while a number of scholars referred to the area in passing when discussing Assyrian military campaigns in the Zagros region (e.g. Billerbeck 1898, 61-62; Cameron 1936, 148) but Gird-i Rostam itself seemingly went unnoticed.

On 30 November 1959, Kamal Mansur and Tariq Abdul-Wahab Madhloom (Directorate of Antiquities, Baghdad) visited Gird-i Rostam and, on the basis of surface finds, attributed occupation at the site to the Uruk and Old Babylonian or Isin-Larsa periods (A. Ameen, pers. comm.; brief results also reported in Directorate General of Antiquities 1970). However, Gird-i Rostam was only brought to the attention of the Directorate of Antiquities in the Governate of Sulaimaniyah in 2016. Kak Kamal Rasheed, Director of the Board of Antiquities and Heritage in Sulaimaniyah, suggested to Prof. Karen Radner, then working at Gird-i Bazar and Gird-i Qalat-i Dinka in the Peshdar plain, that she consider investigating another site in the Penjwin area, since this was virtual *terra incognita*. When asked by Kak Kamal whether he could recommend a promising site, Mr. Amanj Ameen, an archaeologist in the Directorate of

<sup>&</sup>lt;sup>1</sup> Rich 1836, 174 was told that the name is a contraction of New Persian *Bēdistān*, 'place of willows;', cf. Rödiger and Pott 1840, 56.



Fig. 1. Map of northern Iraq showing the location of Gird-i Rostam (A. Squitieri).



Fig. 2. View of Gird-i Rostam from Qale Bistan in 2017 (D. T. Potts).



Fig. 3. Digital elevation model (DEM) of Gird-i Rostam showing the location of the trenches opened in 2018 (A. Squitieri).

Antiquities in Sulaimaniyah, immediately suggested Gird-i Rostam. A preliminary visit to the site was then made by Kak Kamal, Kak Hashim Hama Abdullah (Director, Slemani Museum), Amanj Ameen, Prof. Karen Radner, Dr. Mark Altaweel and Jean-Jacques Herr. A second visit was made together with Prof. Janoscha Kreppner (Münster) and Prof. Jörg Faßbinder (LMU) in order to undertake some preliminary geophysical prospection. Subsequently, two visits were made to the site in May and August, 2017, by Prof. Karen Radner, Prof. D. T. Potts, Dr. Andrea Squitieri (LMU) and Mr. Amanj Ameen, when the site and its environs were mapped by drone. Thereafter it was suggested that NYU and the LMU join forces to conduct excavations at the site, and an initial season of excavation at Gird-i Rostam was conducted from 28 June to 24 July 2018, under the aegis of the Directorate of Antiquities in Sulaimaniyah; the LMU; and NYU. The team consisted of Mr. Amanj Ameen and Mrs. Perween Yawer, Directorate of Antiquities (Sulaimaniyah) Representatives; Prof. D. T. Potts (NYU); Mr. Christoph Forster (datalino, Berlin); Dr. Andrea Squitieri and Mr. Jens Rohde (LMU); Dr. Jean-Jacques Herr (independent scholar); Miss Hero Salih, Directorate of Antiquities (Sulaimaniyah); and Mrs. Hildreth Potts (New York). Invaluable logistical support was provided by Kak Aziz Sharif, our driver, and his son Muhammad; as well as Ibrahim Issa our cook and his daughter Hamrin Mala Issa. Helpful advice during the season was provided by Prof. Karen Radner and Prof. Janoscha Kreppner (Westfälische Wilhelms-Universität, Münster).

#### *Excavation method and registration system* (A. Squitieri)

During the 2017 visit to Gird-i Rostam the site was mapped by drone. In August, 2017, a benchmark was established on top of a house in Bistan (WGS 84/UTM 38 N, E 581728.0348, N 3955878.6107, elev. 1273.9433 m) and four fixed points were cemented around the site, three of which (1-3) were still in place when we returned in 2018. Because these were far from the area chosen for excavation, two new points (5 and 6) were established (Table 1). Subsequently, we created a north-south oriented UTM grid of 10 x 10 m squares identified by the coordinates of their southwest corners. Then, a 2 x 60 m step-trench was laid out from the bottom to the top of the mound.

2018 FIXED POINTS	EAST	NORTH	ELEVATION
GR01	582667.0312	3957097.8488	1200.3823
GR02	582793.8787	3957016.5245	1197.9523
GR03	582722.8571	3956565.1049	1213.5039
GR05 (used daily)	582767.6556	3956866.8942	1205.9781
GR06 (control point)	582804.5781	3956835.1355	1204.6832

Table 1. Coordinates and elevations of fixed points established at Gird-i Rostam (A. Squitieri).

The excavation and registration methods adopted at Gird-i Rostam are modelled on those employed in the Peshdar Plain Project. Excavation was conducted in squares 278685, 278686 and 278688 (Fig. 3). The finds and GIS database used during the excavation to store data was designed by Christoph Forster in MySQL using the Peshdar Plain Project database as a model.

This is based on a locus/collection registration system in which loci (i.e. stratigraphic units) receive sequential numbers following the square number, e.g. 278688:001. A collection of material from a locus receives an additional sequential number, e.g. 278688:001:001. Small finds and samples are registered the same way as collections. Orthophotos, DEMS and 3D models were created using a Phantom 4 Pro drone and Photoscan software in order to document the excavation on a daily basis. Measurements of each locus (outlines and elevations) as well as finds and samples were made with a Leica DGPS GS18. Soil samples for flotation were collected and processed in autumn, 2018, in Qaladize. As a protocol, 1 bucket of soil per 1 m<sup>2</sup> of floor area was collected for flotation.

# Brief summary of the excavations

#### Square 278685 (J. Rohde)

As the general aim of the first season of excavations was to begin to define the occupational sequence of Gird-i Rostam, a series of trenches oriented N–S was laid out in a gently sloping area in the southern part of the site (Figs. 4-5). The 2 m wide x 10 m long trench along the eastern edge of square 278685 was the southernmost of these trenches within the WGS 84 / UTM zone 38N based grid of 10 x 10 m squares. Excavations were carried out by three workmen from Bistan (Hawkar Husayn, Harun Rashid, Hajar Khedir), Perween Yawar (Dept. of Antiquities, Sulaimanyiah) and the author (LMU). Due to the very gentle slope here it was hoped that virgin soil could be reached and the full occupational sequence of the site documented. In fact, due to time constraints, this could not be achieved. However, excavations revealed deposits datable to the Late Chalcolithic Period 1-2 and the Middle/Late Sasanian period, judging by the pottery recovered (Figs. 35-41) and a single radiocarbon date (see below). The sounding began at an elevation of 1206.7 m and was carried to about 1203.2 m (Fig. 6). The elevation of the cultivated area of the plain nearby is about 1204.7 m. The excavation is described in the order in which the deposits were accumulated, from earliest to latest (Fig. 7).

#### Late Chalcolithic deposits

The oldest loci in square 278685 were reached in the northern part of the trench where, in a 2 x 2 m sounding, two stone installations (Locus:278685:021 and Locus:278685:022) were uncovered. Installation Locus:278685:021 is oriented SE–NW. The southern and the western limits are covered by the baulks. The eastern edge slopes towards the NE down to a pebble floor, Locus:278685:023. The northern side is bounded by a similar installation, Locus:278685:022, which is oriented SW–NE. Both wall-like features were made of cobbles, pebbles and pottery sherds (Fig. 8). The latter contains only a few cobbles and slopes towards the SE, down to floor Locus:278685:023. Its northern and western limits lie beyond the excavated area. Both installations form an approximate right angle. East of this floor Locus:278685:023 was unearthed. This is made of clayey soil and pebbles, of a lower density then the stone installations, and abuts both of them. Sherds lie on the floor. For the time being any interpretation of these features must be considered preliminary. This might be part of a terrace or wall, or the edge of a path. Above this were several fill deposits containing many sherds (Locus:278685:020 and Locus:278685:019). Locus:278685:019 was particularly rich in pottery, flint and obsidian (see below). A charcoal sample from this locus was dated by



Fig. 4. Drone photo of Gird-i Rostam showing the trenches opened in 2018 (A. Squitieri).



Fig. 6. Profile view of the trenches opened in 2018 at Gird-i Rostam (J. Rohde).



Fig. 5. Drone photo showing the relative positions of excavated areas in trenches 278688, 278686 and 278685 at the end of the 2018 season (J. Rohde).



Fig. 7. Stratigraphic summary of the 2018 excavations at Gird-i Rostam (J. Rohde).

98

JEOL 47 — 2018-2019



Fig. 8. Loci: 278685:020-23 (J. Rohde).

AMS to the late fifth millennium BC (Table 2). The levelling Locus:278685:018 of floor Locus:278685:017 above contained less pottery and few finds. The slightly southeast-sloping pebble floor of an outdoor area, Locus:278685:017, was covered by fill. Locus:278685:016 underlay similar fill Locus:278685:015. Both deposits contained Late Chalcolithic pottery. These were covered by a surface Locus:278685:014, indicated by only a few sherds and some gravel. Judging by the pottery, the fill Locus:278685:013 on the surface seemed to be the latest Late Chalcolithic deposit and appears to be an ancient surface post-dating an abandonment of the settlement.

Lab code	Material	Context	CRA <sup>2*</sup>	Calib. age (95% prob)**3
Wk-48016	charcoal	278685:019:009	5524 ± 20 BP	4446 - 4336calBC
Wk-48020	charcoal	258688:011:004	3802 ± 19 BP	2295 - 2147calBC

Table 2. AMS radiocarbon dates from Gird-i Rostam.

#### Sasanian deposits

The fill (Locus:278685:012, Locus:278685:011 and Locus:278685:010) above the Late Chalcolithic deposits contained mostly Sasanian pottery, with an admixture of some residual Chalcolithic sherds. Above this debris floor Locus:278685:007 was uncovered. This south-ward-sloping floor was made of pebbles and pottery sherds pressed into its surface, suggesting it was an outdoor floor. A boulder on the floor may have been robbed from a wall such as that found in square 278688 (see below), though for what purpose we do not know. Above the floor and almost completely surrounding the boulder was the fill Locus:278685:006 which contained only Sasanian pottery. This was covered by a southward-sloping, probably natural surface Locus:278685:005 indicated by sherds and baked bricks lying horizontal. A layer of fill Locus:278685:003 and Locus:278685:004 covered the surface up to the topsoil (Locus:278685:002). The southern half of trench contained traces of ploughing which only affected the thin layer of topsoil here (Locus:278685:002). The modern surface of the mound (Locus:278685:001) was covered with dense foliage which was removed before excavation. The rare sherds found on the surface all appear to be Sasanian.

#### Smallfinds from Square 278685 (A. Squitieri)

Objects from the Late Chalcolithic levels (Loci:278685:016-023) are typical of this period and include a terracotta ram figurine (Fig. 9); a terracotta bead; a possible grinding stone; one pestle; two whetstones; 14 flint fragments (isolates); 6 flint collections (débitage, flakes, blades and at least two cores); and 35 obsidian fragments of débitage, flakes and blades (Fig. 10).

Objects from the Sasanian levels (loci: 278685:003-015) include one whetstone; a possible pounder; two copper-bronze fragments; one iron sickle blade; one iron needle; two fragments of glass (isolates) and two glass collections; a terracotta figurine fragment

100

<sup>&</sup>lt;sup>2</sup> conventional radiocarbon age.

<sup>&</sup>lt;sup>3</sup> Pretreatment of samples followed standard protocols. Samples were washed in hot HCl, rinsed and treated with multiple hot NaOH washes. The NaOH insoluble fraction was treated with hot HCl, filtered, rinsed and dried. The Carbon-13 stable isotope value ( $\delta^{13}$ C) was measured on prepared graphite using the AMS spectrometer and is not reported. Ages were calibrated at the 95% confidence limit using OxCal 4.3 (Bronk Ramsey 1995) and the IntCal 13 calibration curve (Reimer et al. 2013).



Fig. 9. Terracotta ram figurine (A. Squitieri).



Fig. 10. Selection of obsidian from Gird-i Rostam (A. Squitieri).

(human?) and an unidentified terracotta object; and a possible clay sealing fragment. Two flint flakes (isolates) and four flint collections may be residual finds of Chalcolithic date.

# Analysis of five obsidian samples from Gird-i Rostam (B. Gratuze)

Five obsidian artifacts from Gird-i Rostam were analyzed at the Center Ernest-Babelon of the IRAMAT (UMR 5060 CNRS / Univ. Orléans) by Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LA-ICP-MS). The instrumentation consists of an Element XR (Thermofisher Instrument) associated with a Resonetic UV laser microprobe (ArF 193 nm). The laser was operated at 5 mJ with a pulse frequency of 10 Hz. A pre-ablation time of 20 s was set in order to eliminate the transient part of the signal which is then acquired for 15 s corresponding to 8 mass scans from lithium to uranium (the signal in count/second is measured in low resolution mode for 38 different isotopes). Single-point analyses of the unprepared solid samples were carried out with a laser beam diameter of 100  $\mu$ m, the depth of the crater is in the order of 150  $\mu$ m. External calibration was performed using the National Institute of Standards and Technology (NIST) glass Standard Reference Materials 610, along with Corning reference glasses B and D. <sup>28</sup>Si was used as an internal standard. Concentrations were calculated according to the protocol detailed in Gratuze 1999 and Chataigner and Gratuze 2014, which allows detection limits to range from 0.01% to 0.1% for major elements, and from 20 to 500 ppb for minor and trace elements.

Four of the five obsidian flakes from Gird-i Rostam were studied are homogeneously dark with a slight greenish tint (GIR 13-16; Figs. 12-15) while the fifth is zonated, with alternating translucent and greyish-black bands (GIR 12; Fig. 11). The five samples fall into two different chemical composition groups (Table 3 and Figs. 16-17).

The first group, consisting of the four dark, slightly greenish samples, has a peralkaline composition. In the Near East, peralkaline obsidian originates from the outcrops of two main volcanoes: Solhan (previously known as Bingöl A) and Nemrut Dağ (Chataigner *et al.* 1998) in Turkey. Although the chemical composition of these two peralkaline obsidian outcrops is fairly similar it is possible to distinguish them by their iron, titanium and manganese contents (Fig. 17) as well as by their rubidium to cesium and yttrium to niobium ratios (Khalidi *et al.* 2016). Based on these criteria the peralkaline obsidian artefacts recovered at Gird-i Rostam (GIR 13-16) originate unambiguously from the Sıcaksu outcrop of the Nemrut volcano (Robin *et al.* 2016). The fifth, zonated sample (GIR 12), which forms the second group, is typical of the calcalkaline obsidian from the Mets Sevkar-Pokr Sevkar outcrops of the Syunik complex (also referred to as the Syunik 3 group; Chataigner and Gratuze 2014) in southern Armenia.<sup>4</sup> The average direct linear distance between these two obsidian sources and Gird-i Rostam is between 450 and 500 km, but the actual length of the paths followed to supply obsidian to the site was much longer and probably far greater than 500 km (Chataigner and Barge 2010; Barge *et al.* 2018).

<sup>&</sup>lt;sup>4</sup> A comprehensive study is being carried out on obsidian sourcing in eastern Anatolia within the framework of the Geobs project directed by Damase Mouralis (http://geobs.univ-rouen.fr). The information and results dealing with locations and compositions of obsidian sources (Solhan and Nemrut-Sıcaksu) presented in this article derive from this project.

	Syunik3	Nemrut-Sıcaksu			
% oxide	GIR 12	GIR 13	GIR 14	GIR 15	GIR 16
Na <sub>2</sub> O	4.00	4.94	4.94	4.95	4.96
MgO	0.053	0.0009	0.0009	0.0009	0.0010
Al <sub>2</sub> O <sub>3</sub>	13.4	11.9	12.0	12.0	12.0
SiO <sub>2</sub>	76.5	75.0	74.9	74.9	74.9
K <sub>2</sub> O	4.58	4.35	4.33	4.35	4.34
CaO	0.53	0.25	0.25	0.25	0.25
TiO <sub>2</sub>	0.088	0.15	0.15	0.15	0.15
Fe <sub>2</sub> O <sub>3</sub>	0.71	3.02	3.03	3.02	3.02
ppm element					
Li	51.2	70.2	69.8	70.2	70.1
В	16.0	101	101	103	102
Mg	321	5.58	5.65	5.16	5.77
Sc	7.44	9.19	9.28	9.55	9.43
Ti	529	905	904	899	901
Mn	433	440	441	441	440
Zn	31.8	179	180	178	181
Rb	179	224	223	225	224
Sr	15.9	0.10	0.10	0.09	0.08
Y	9.38	112	113	112	111
Zr	90.5	1145	1149	1136	1134
Nb	30.1	54.7	54.7	54.6	54.3
Cs	4.21	7.37	7.35	7.40	7.38
Ba	40.7	0.87	0.69	0.74	0.71
La	34.2	93.2	92.6	90.6	91.4
Ce	53.1	191	190	185	187
Pr	4.37	21.3	21.3	20.9	20.9
Nd	11.9	83.6	83.4	81.9	82.6
Sm	1.54	18.1	18.3	18.0	18.1
Eu	0.17	0.46	0.45	0.45	0.45
Gd	1.27	17.2	17.2	17.1	17.1
Tb	0.19	3.09	3.06	3.06	3.01
Dy	1.25	19.3	19.4	19.1	19.2
Но	0.27	4.10	4.12	4.04	4.06
Er	0.92	11.6	11.8	11.5	11.6
Tm	0.16	1.73	1.76	1.71	1.74
Yb	1.36	12.4	12.3	12.2	12.3
Lu	0.21	1.77	1.78	1.76	1.77
Hf	3.21	24.1	24.3	23.8	23.8
Та	1.75	3.09	3.07	3.06	3.06
Th	31.8	24.7	24.7	24.2	24.4
U	9.47	8.18	8.16	8.10	8.11

Table 3. Chemical compositions measured for the Gird-i Rostam's obsidian artefacts. Contents are expressed in weight % for the main oxides and in parts per million for trace elements (1 ppm = 0.0001 %).







Fig. 12. GIR 13 (278686:019:027), from the Nemrut-Sıcaksu outcrop.



Fig. 13. GIR 14 (278686:019:031:001), from the Nemrut-Sıcaksu outcrop.



Fig. 14. GIR 15 (278686:019:031:002), from the Nemrut-Sıcaksu outcrop.



Fig. 15. GIR 16 (278686:019:031:003), from the Nemrut-Sıcaksu outcrop.



Fig. 16. Rare earth element and extended trace normalized plots for the artefacts recovered at Gird-i Rostam and geological samples originating from Nemrut-Sıcaksu (Geobs ANR research program corpus) and Syunik-Mets Sevkar/Pokr Sevkar outcrops. Earth crust normalization from K. H. Wedepohl (1995).



Fig. 17. Binary diagram of titanium (Ti) vs. manganese (Mn) for the artefacts recovered at Gird-i Rostam and for geological samples originating from Solhan and Nemrut-Sıcaksu (Geobs ANR research program corpus) and from the different outcrops of the Syunik complex.

# Square 278686 (J.-J. Herr)

Excavations were conducted by Jean-Jacques Herr, Amanj Ameen and Perween Yawar together with the help of three workmen, Loqman Muhammad, Jwamir Habib and Adam Kamal. The trench measured  $2 \times 10$  m with a 50 cm wide balk at the southern end of the trench. Excavations reached a depth of c. 40 cm and 90 cm in the northern and southern ends of the trench, respectively.

# Sasanian deposits

Like floor Locus:278685:007 to the south, floor Locus:278686:007 is an installation of small and medium sized pebbles and sherds probably deposited on the surface of the site during the Sasanian period. The deposits slope gently from north to south. Above this was a suprafloor (Locus:278686:006), containing many sherds, which consisted of a dark brown sediment, disturbed by plant roots. This was in turn covered by fill containing similar pottery (Locus:278686:005). Another surface (Locus:278686:004), indicated by a few flat-lying sherds, was covered by dark brown soil (Locus:278686:003), in turn overlain by topsoil (Locus:278686:002). The surface showed faint traces of old ploughing which pre-dated the period when the mound ceased to be cultivated and became covered by dense vegetation (Locus:278686:001). Excavations were terminated as the material and features found in the southern part of the trench were largely identical to those immediately to the south in square 278685.

# Smallfinds from Square 278686 (A. Squitieri)

Among the few smallfinds recovered here were one polishing stone; one whetstone; one bronze nail and an unidentified bronze fragment; one iron knife blade and an unidentified iron object; two glass fragments (isolates) and three glass fragment collections.

# Square 278688 (J.-J. Herr)

The contours of the mound suggested the presence of substantial architectural features directly beneath the surface in the northern part of square 278688 and as such, given time constraints, it was decided to terminate excavations in 278686 and excavate higher up the mound. A 2 x 2 m sounding was therefore opened in the north of square 278688, 18 m north of the trench in square 278686. Excavations were carried to a depth of 2.30 m below the surface.

# Pre-Sasanian deposits

The oldest structure recovered so far is an installation of boulders, cobble stones and flat stones (Locus:278688:012) in the southern part of the sounding at an elevation of c. 1210.5 m. This may be an ancient wall (Fig. 18). Above this is a 1 m thick, drystone wall (Locus:278688:008), oriented east-west, built on a layer of dark brown sediment (Fig. 19). We do not know yet if the two courses of stones exposed constitute its foundation or part of its elevation. Although no floors were associated with this wall an AMS date on charcoal (Locus 278688:011:004) falling in the late third millennium BC (Table 2) was obtained from a deposit of undifferentiated fill containing sherds, animal bones and stones adjacent to the south side of the wall, but not associated with an adjacent surface. A bronze pin was found beneath one stone in the topmost course of the wall.

106



Fig. 18. Locus:278688:12, stones in the left of the trench, below the level of Locus:278688:008.



Fig. 19. Wall Locus: 278688:008 and adjacent deposits Locus: 278688:009-11.

# Sasanian horizon

Above the drystone wall, a massive mudbrick structure (LGR002; LGR = 'locus group') filled the entire sounding up to the topsoil (Fig. 20). To date around 14 courses of mudbrick measuring, in the northern section, 36 cm, and in the eastern section, 40 cm in length, have been identified. The bricks are about 8 cm thick (Fig. 20). The orientation of this feature is unclear. It may be a massive structure such as a terrace wall contouring the southern slope of the mound. While excavating the different courses of the wall, it was difficult to see any brick joins even with careful brushing. Only occasionally were layers of yellowish sediment (Locus:278688:005) and tiny stones found which proved to be the mortar between each course of mudbricks. This feature appeared directly below a thin layer of topsoil (Locus:278688:002) and rests on a deposit of soil containing sherds and charcoal (Locus:278688:009-011).

#### Smallfinds from Square 278688 (A. Squitieri)

The few smallfinds recovered included one whetstone, one copper-bronze pin and an intrusive sherd with a short cuneiform inscription (Fig. 21).

# Ceramic sherd with a cuneiform inscription (278688:010:005) (Karen Radner)

The small pottery sherd (Fig. 21) bears two fragmentary lines of a cuneiform inscription in Akkadian whose individual signs measure about 0.7 cm in height. The signs correspond to well-attested Neo-Assyrian characters, although admittedly there are so few signs, and none of them diagnostic, that the script might as well date to the Old Babylonian or Middle Babylonian period. However, the shape of the vessel and the content of the inscription support a Neo-Assyrian date.

The inscription runs along the vessel's neck. The curve of the sherd allows us to reconstruct the diameter at the neck as about 17 cm. Due to the sharp angle of its rim, the vessel can be reconstructed either as an open-necked jar with a flaring rim or as a carinated bowl with a sharply defined shoulder, a waisted neck and a flaring rim. Given the thinness of the rim (0.5 cm), the latter possibility is likelier.

Carinated bowls were commonly used for drinking wine in the Neo-Assyrian Empire. Examples in metal (Howes Smith 1986, 48-50, fig. 4a; Radner 1998-2001; Curtis 2008, 244-245), rock crystal (Hussein 2016, 16, 86, pl. 42a: ND 1989.66), glass (Jones 2005, 108) and clay (Hunt 2015) are well-attested in the late eighth and seventh century BC. The rock crystal bowl as well as a number of the metal bowls bear short inscriptions that identify their owner by name and/or title. That the vessel was received as a gift from the king during a royal banquet is always implied but not made explicit (Radner 1998-2001, 18-19). In our case, however, the inscription is certainly longer:

1. [... x]x *an-nu-u š*[á ... ] 2. [...] <sup>d</sup>IM [...]

The readings of all these signs are certain. Note that the impression in the top left corner of the last sign in line 1 (a fragmentary  $\delta \hat{a}$ ) was not made with a stylus but resulted from a burntout organic inclusion in the clay (as can be seen elsewhere on the surface of the sherd). Two vessels with inscriptions of king Sennacherib provide parallels for our text fragment. The first



Fig. 20. LGR002 seen in the east section of square 278688.



Fig. 21. Inscribed sherd 278688:010:005.

(Searight, Reade and Finkel 2008, 23, pl. 10: no. 61 [jar]; Grayson and Novotny 2014, no. 133 [inscription]) reads as follows:

(1) *a-na-ku*<sup>md</sup>30-PAP.MEŠ-SU MAN KUR AŠ NA<sub>4</sub>.na-ah-bu-<sup>r</sup>su<sup>1</sup> *an-ni-u a-na*<sup>m</sup>Aš-šur-DINGIR. MU.TI.LA.'BI DUMU'-[ia] (2) *at-ti-din man-nu šá* TA *pa-ni-šú* TA DUMU.MEŠ-šú DUMU.ME DUMU.ME-šú *i-na-áš-šú-u-ni* AN.ŠÁR MAN DINGIR.MEŠ (3) 'a-di<sup>1</sup>DUMU.MEŠ-šú TI.LA *li-ki-mu-šú-nu a-du ma-li-ke-e-šú* MU-šú-nu NUMUN-šú-nu ina KUR *lu-hal-li-qu* 

The second (Searight, Reade and Finkel 2008, 74, pl. 49: no. 512 [saucer]; Grayson and Novotny 2014, no. 134 [inscription]) reads as follows:

(1) [*a-na-ku* <sup>md</sup>30-PAP.MEŠ-SU MAN KUR AŠ NA<sub>4</sub>].*kap-pu an-nu-u a-*<sup>r</sup>*na* <sup>m</sup>Aš-šur<sup>3</sup>-DINGIR. MU-TI.LA.BI DUMU-*ia at-ti-din* <sup>'man<sup>3</sup>-[*nu šá* TA *pa-ni-šú* TA DUMU.MEŠ-šú DUMU.ME DUMU.ME-šú *i-na-áš-šú-u-ni*] (2) AN.ŠÁR MAN DINGIR.MEŠ *a-di* DUMU.MEŠ-šú TI.LA *li*]-<sup>'</sup>*kim*<sup>3</sup>-šú-*nu a-du ma-li-ke-e-šú* MU-*šú-nu* [NUMUN-*šú-nu ina KUR lu-hal-li-qu*]</sup>

"I, Sennacherib, king of Assyria, gave this *nahbuṣu*-vessel / *kappu*-vessel to Aššur-ili-muballissu, my son. Whoever should take it away from him, from his sons, (or from) his grandsons, may (the god) Aššur, king of the gods, take away his life, as well as (those of) his sons, (and) may he (lit. "they") make their name(s) (and) their seed, as well as (those of) his advisors, disappear from the land."

Two observations arise from these texts. First, the Sennacherib inscriptions suggest that the passage in front of  $ann\hat{u}$  'this' should be restored with the term for the specific vessel. Depending on whether we reconstruct the vessel as a bowl or as a jar, we should therefore restore  $k\bar{a}su$  'drinking bowl' (logographic writing DUG.GÚ.ZI or GÚ.ZI) or *šapputu* 'jar' (logographic writing DUG.ŠAB or ŠAB). None of the possible spellings for these terms fit the traces of the broken sign, but the logogram GEŠTIN for  $kar\bar{a}nu$  'wine' is an excellent match. Secondly, the Sennacherib inscriptions provide two possible interpretations for <sup>d</sup>IM in the second line. On the one hand, the storm god's name may have been invoked as part of a curse protecting the object. Although such precautions may be appropriate in the case of the expensive stone vessels gifted to Prince Aššur-ili-muballissu this safety measure seems perhaps too far-fetched for a rather more mundane ceramic vessel. The second possibility is therefore more likely, namely that the storm god's name formed part of the personal name of the recipient of the vessel; names with Adad/Adda are well-attested throughout the Neo-Assyrian Empire (cf. Radner 1998, 21-51). It is of course unclear where in the name the divine element was positioned.

A third Sennacherib inscription (Grayson and Novotny 2014, no. 156: 4) may perhaps provide a clue to the reconstruction of the passage after  $ann\hat{u}$ :

NA4.KIŠIB an-nu-u TA KUR Aš-šur ana KUR URI.KI šá-ri-ik ta-din

'This seal was given as a gift from Assyria to Akkad.'

In our text, too, the vessel may have been described as having been 'given as a gift' (*šarik tadin*). On balance, however, it seems more likely that the sign  $š\dot{a}$  is simply the introduction ša 'which' in a subordinate clause that provides further information on the vessel.

In conclusion, I would argue that our sherd represents a drinking bowl rather than a jar, citing the thickness of the sherd as well as the fact that several examples of drinking bowls with inscriptions are known. I therefore restore  $k\bar{a}s \ kar\bar{a}ni$  'wine drinking bowl' in line 1. I assume that the description of the vessel continues with a subordinate clause introduced by sa 'which' and that the entire sentence continues in line 2, mentioning here the owner of the

bowl while the name of the (most likely royal) donor was probably mentioned at the beginning of line 1. The complete sentence very likely ended in line 2 with a form of the verb *tadānu* 'to give,' either *ittadin* 'he has given' or *attadin* 'I have given.' The following reconstruction may therefore be proposed:

1. [... (DUG.)GÚ.ZI GEŠT]IN an-nu-u š[á ... ]

2. [...] <sup>d</sup>IM [...]

[...] this wi[ne drinking bowl] which [...] Adad [...]

#### Ceramic analysis (J.-J. Herr)

The pottery from the first season at Gird-i Rostam was processed by Hero Salih and Jean-Jacques Herr. Hero Salih organized the workflow, sorted and photographed all of the sherds and drew some collections. Muhammad Aziz and Hamrin Mala Issa washed and marked all the sherds. Hildreth Potts drew the sherds and the complete profiles. This season 11,031 sherds were found (1771 diagnostic sherds = 75.2 kg; 9260 non-diagnostic sherds = 251.7 kg) dating to the Sasanian and Late Chalcolithic periods. The method used to process the pottery is similar to that used on the Peshdar Plain Project. All sherds are kept. The interior, exterior and profiles of all diagnostic sherds were photographed in order to document morphological and technical macro-traces. Each collection of sherds was photographed as a group in order to give an impression of the quantity of material recovered in each locus.

During this first campaign we made a preliminary study of the *chaîne opératoire* of ceramic production, following the methodology developed by Valentine Roux (CNRS) which focuses on macro-traces left by potters before firing their vessels. All visible macro-traces on diagnostic sherds (internal, external or in section) were described in order to identify and reconstruct manufacturing techniques. Then the fabric was classified. The profile and topography of the sherds as well as granulometry were observed both with the naked eye with a Dino-Lite Digital Microscope (model AM4113T, with up to 200x magnification). To our knowledge this method has never been applied before to Sasanian pottery, whereas it has been used by J. S. Baldi on Chalcolithic material from Logardan and Gird-i Qala (Baldi 2016a-b).

#### Macroscopic fabric description

Twelve ceramic fabrics have been identified at Gird-i Rostam. These are described below at the macroscopic level. A local origin for the pottery is suggested by the high frequency of schist inclusions. Schist is common in the mountainous landscape around Penjwin (Fig. 22).

#### Middle/Late Sasanian

*Fabric A1. Schist-tempered* — 25% angular grey, reddish schist inclusions, poorly sorted; and 2% angular white minerals (quartz) (Fig. 23).

*Fabric A2. Schist-tempered* — 25% sub-rounded, well-sorted, reddish-grey, shiny mineral (schist?) inclusions (Fig. 24).

*Fabric B. Quartz and sparry calcite temper* —35% angular, white, moderately sorted (sparry calcite?) inclusions (Fig. 25).



Fig. 22. Schist outcrop near Gird-i Rostam (J. Rohde).



Fig. 23. Fabric A1, Middle/Late Sasanian (J.-J. Herr).



Fig. 25. Fabric B, Middle/Late Sasanian (J.-J. Herr).



Fig. 24. Fabric A2, Middle/Late Sasanian (J.-J. Herr).



Fig. 26. Fabric D, Middle/Late Sasanian (J.-J. Herr).



Fig. 27. Fabric J, Middle/Late Sasanian (J.-J. Herr).

*Fabric D* — This is composed of 10% schist, medium sized, and 5% small, white, sub-angular, sorted inclusions. Most sherds are heavily weathered (Fig. 26).

*Fabric J* — This consists of 10%, very small, angular grey inclusions; 1% dark, sub-angular inclusions; and 1% angular white quartz. The surface is porous (Fig. 27).

# Iron Age

Fabric C — finely levigated clay with little organic temper (Fig. 28).

# Late Chalcolithic

*Fabric E. Chaff-faced* — fine to medium sized chaff (0.1-0.4 cm long), and rarely long chaff inclusions (0.7 cm long); 5% well-sorted, fine, white, sub-angular minerals; very porous texture (Fig. 29).

*Fabric F. Chaff-faced and schist-tempered* — abundant fine chaff (0.1-0.4 cm long; 5-10% sub-angular, grey and reddish minerals (schist), poorly sorted; 2% angular white minerals (quartz), moderately sorted; 2% tiny, shiny yellow inclusions; very porous texture (Fig. 30).

*Fabric G* — Similar to F, many large chaff inclusions; 3% white, angular, well-sorted minerals (quartz); 5% reddish, sub-rounded minerals (schist?); 1% tiny shiny inclusions (mica?) (Fig. 31).

*Fabric H. Sparry calcite temper* —35% fine, sub-angular, white minerals (sparry calcite?), well-sorted; 20% sub-angular, moderately sorted grey minerals (schist); 2% fine organic material; may have been used to manufacture cooking pots (Fig. 32).

*Fabric I* — 15% moderately sorted, grey, sub-angular minerals; 10% fine white, sub-rounded minerals, well-sorted (Fig. 33).

*Fabric K* — abundant fine, organic material (0.1-0.4 cm long); 1% small, well-sorted, dark, angular minerals; restricted to painted, Ubaid-related pottery (Fig. 34).

## Late Chalcolithic pottery

Large quantities of Late Chalolithic pottery were found in the deep sounding in trench 278685. Typical shapes (Figs. 35-36) of the Late Chalcolithic 1-2 period were found from Locus:278685:013 down to the Locus:278685:020. Numerous parallels may be cited at both Logardan and Tepe Gawra (level XII). These consist of both large and small, deep bowls (Tobler 1950, pl. 132.226) with everted rims (Tobler 1950, pl. 135.267); shallow bowls with thinned, rounded rims (Tobler 1950, pl. 127.174, 177); rectangular trays; flaring-rim jars (Tobler 1950, pls. 138.303 and 142.349-353; Baldi 2016a, pl. 2.5); cylindrical beakers with everted rims and flat base; and larger, neckless jars with everted rim (Baldi 20161, pl. 2.3-4 and 2016b, 118).

Many manufacturing techniques are attested, including moulding and hammering for making large, open vessels; coiling for the deep bowls; and wheel coiling for some bowls and small jars with flaring rims. The surface treatment recognized so far consists of textile burnishing. This has been observed on fragments of deep bowls, small bowls (278685:019:036) and the interiors of cooking pots.



Fig. 28. Fabric C, Iron Age (J.-J. Herr).



Fig. 29. Fabric E, Late Chalcolithic 1-2 (J.-J. Herr).



Fig. 31. Fabric G, Late Chalcolithic 1-2 (J.-J. Herr).



Fig. 33. Fabric I, Late Chalcolithic 1-2 (J.-J. Herr).



Fig. 30. Fabric F, Late Chalcolithic 1-2 (J.-J. Herr).



Fig. 32. Fabric H, Late Chalcolithic 1-2 (J.-J. Herr).



Fig. 34. Fabric K, Late Chalcolithic 1-2 (J.-J. Herr).



Fig. 35. Selection of Late Chalcolithic 1-2 pottery from Gird-i Rostam (H. Salih).



Fig. 36. Profiles of Late Chalcolithic 1-2 pottery from Gird-i Rostam (H. B. Potts and J.-J. Herr). Rim diameters are indicated just above the lefthand profile. Fabrics represented include E (k), F (a-f, h-i), G (g) and H (j, l).

# Ubaid-related pottery

Only a few sherds were found which might be Ubaid-related. One sherd, a flat base (Fabric K) made of a yellow fabric with one dark, horizontal band painted on the interior, was found in mudbrick wall LGR2 in trench 278688. An almost complete but fragmentary painted bowl was recovered in Locus:278685:019 (Figs. 37-38). The painted pattern consists of two rows of alternating upward- and downward-oriented triangles running between two horizontal bands and is similar to an Ubaid-related surface find from Bouleran in Luristan (Fig. 39; Goff 1971, fig. 2.47). A similar triangular pattern set on verticals rows is also attested at Tepe Gawra in levels XVI-XV (Tobler 1950, pl. CXLIX.449). The Gird-i Rostam specimen has three to four dots filling the cells between each triangle and comes from the same locus as the charcoal sample dated by AMS to late fifth millennium BC (Table 2).

## Sasanian pottery (Fig. 40)

Sasanian pottery was recovered from the topsoil down to Locus:278685:011 in the southernmost trench. In trench 278686, only Sasanian material was found. In the northern sounding (trench 278688) Fabrics A1 and A2 (Sasanian) were found beneath the mudbrick wall LGR2 in the fill Loci:278688:009-011. The Sasanian pottery from Gird-i Rostam was made with mineral temper and is generally coarse. The color is reddish (Munsell chart 5YR6/4), except in the case of glazed sherds, only a few examples of which were found. These have a distinctive fabric (Fabric J) and color. The glaze is turquoise blue and shows many bubbles. The glazed pottery may have been imported from southern Mesopotamia.

Typically, Sasanian features include double-rim jars, and rectangular, thickened rims marked with a hollow band made with the finger or a tool. Large vats with simple, triangular rims are also attested. Some hemispherical bowls have incurving or straight rims. A small jar with a globular body and a concave, cylindrical neck and triangular rim, made with the wheel-coiling technique, was found in Locus:278685:010. The elaborated beaded rims of the jars are all made with coils. Different manufacturing techniques, such as the beating technique for the manufacture of large jars on a concave mould, are attested. The rims are made with coils joined to the body, which was thrown on a wheel. The decoration of the jars consists of wavy lines made with a comb; wooden cylinder-stamped impressions; and finger impressions. Good parallels have been found at Tell Sitak (Saber, Hamza and Altaweel 2010, figs. 18-19), Bestansur (Cooper, Rijib and Ahmed 2012, fig. 3), Qaleh-e Yazdigird (Keall and Keall 1981) and Khirbet Deir Situn (Curtis 1997). The most diagnostic decorations, assigned to the fourth to seventh centuries AD, are the wooden die-stamped impressions marking the body of some jars.

# Sasanian stamped pottery (D. T. Potts) (Fig. 41)

Two sherds show impressed crosses in a circular field, as if made using a wooden die. Parallels for these can be found at a number of sites in northern Iraq and Syria. At Khirbet Deir Situn, a site excavated as part of the Eski Mosul Dam project (1977-1987) with 'a significant assemblage that formed the basis for a comparative analysis of Late Sasanian die-stamped ceramics' (Simpson 1996, 99-100; cf. Puschnigg 2006, 6-7), four out of nine



Fig. 37. Photograph of nearly complete black-on-buff bowl from Locus:278685:019:020, Fabric K, rim diameter 16 cms. (H. Salih).





Fig. 40. Profiles of Sasanian pottery from Gird-i Rostam (H. B. Potts and J.-J. Herr). Rim diameters are indicated just above the lefthand profile. Fabrics represented include A1 (d, g-k) and A2 (a-c, e-f). The example of glazed ware is Fabric J1.



Fig. 41. Die-stamped Sasanian pottery from Gird-i Rostam (photos: H. Salih) and comparanda. a. 278685:006:001:146, Fabric A1; b. 278686:003:001:001, Fabric A2; c. 278685:010:001:001, Fabric A1.

die-stamped sherds had large crosses generally similar to those found at Gird-i Rostam. Further parallels can be cited at Aqar Babira (Sürenhagen 1987, figs. 2-3); Qaradere (Roaf 1983, fig. 9.1-5); and Nineveh (Layard 1853, 591; Campbell Thompson and Mallowan 1933, pl. LXXVII). As Curtis noted, 'The purpose of this Late Sasanian stamped pottery is quite unclear: the stamps might have been put on jars containing a particular commodity, or they might be indications of the place of manufacture. It is even possible that their distribution could be restricted to Christian communities, but this is all speculative' (Curtis 1997, 373). The list of sites in northern Iraq and Syria with die-stamped Sasanian pottery now includes, at a minimum, Arpachiyah, Tell Barri, Tell Batas, Tell Brak, Buldakh, Kushaf, Tell Mohammad Diyab, Nimrud, Nineveh, Nuzi, Tell Qarassa, Tekrit, Wiron Shehir and Zawi Chemi Shanidar, Khirbet Deir Situn, Aqar Babira, Qaradere, Tell Sitak and Gird-i Rostam (Simpson 1996, 102; Simpson 2013, fig. 3.13; Saber, Hamza and Altaweel 2010, fig. 19.3, 5).

#### Concluding remarks on the ceramics (J.-J. Herr)

The pottery from the first season at Gird-i Rostam shows strong links with surrounding regions. Even if most of it was made locally, as suggested by the abundance of schist in the fabric, the types are similar to those found both to the west (Nineveh and Chamchamal plain) and the east/southeast (Luristan) during the Late Chalcolithic and Sasanian periods, suggesting that Gird-i Rostam was located on an important route linking the Iranian plateau and the northern Mesopotamian plain. Indeed, potters employed similar techniques in these areas. One season of excavations has already yielded a good sample of both Sasanian and Late Chalcolithic 1-2 fabrics and decorations.

#### Conclusion (D. T. Potts)

The first season of excavations at Gird-i Rostam has unquestionably demonstrated the great potential of the site. An enormous quantity of diagnostic pottery was recovered from two relatively small soundings, suggesting that the site was occupied in the Sasanian and Late Chalcolithic periods, while a C14 date in the late third millennium BC implies Bronze Age occupation and an inscribed sherd bearing a short cuneiform text that is almost certainly Neo-Assyrian suggests a link to the Assyrian empire. The Penjwin region has yet to be intensively explored by archaeologists, but the Gird-i Rostam excavations give every indication that this agriculturally rich area of eastern Kurdistan (Fig. 42), like the better known areas to the north and west where multiple excavations are currently ongoing, deserves the attention of all archaeologists interested in the development of the Zagros region through time. Gird-i Rostam affords us an outstanding opportunity to explore both local, indigenous development and the external relations of an area at the crossroads of the Mesopotamian and Zagrosian worlds.



Fig. 42. 3D view of the Shalar valley showing the location of Gird-i Rostam. The village of Garmik appears in the foreground. The DEM usedfor the 3D reconstruction is taken from the USGS and the satellite image is from Bing (J. Rohde).

As we look forward eagerly to a second season of excavations in 2019, four clear goals have emerged.

1. reaching virgin soil and determining whether the site was occupied during the Neolithic and Early and Middle Chalcolithic — Due to time constraints it was not possible to reach virgin soil in 2018. What, if anything, lies beneath the Late Chalcolithic deposits exposed to date? When was the settlement at Gird-i Rostam first founded? How continuous was occupation at the site during the Early and Mid-Holocene? Was occupation influenced by changing climatic conditions, such as the Mid-Holocene Climactic Optimum (Stevens, Wright and Ito 2001; Wasylikowa *et al.* 2006)? Is there any evidence that the aridity of the Younger Dryas adversely affected occupation around Gird-i Rostam, as has been proposed for nearby parts of the Iranian Zagros (Darabi 2012)?

2. the refinement of the chronology of the Late Chalcolithic in northern Mesopotamia — The 2018 excavations at Gird-i Rostam revealed evidence of substantial occupation during the early Late Chalcolithic (LC 1-2) and have provided one AMS date in the late 5th millennium BC. However, recent work on the Late Chalcolithic chronology of northern Mesopotamia, based on both older excavations (e.g. Tepe Gawra, Yarim Tepe, Telul eth-Thalathat, Tell Brak) and newer ones (e.g. Helawa, Tell Nader, Surezha) (Peyronel and Vacca 2015; cf. Kopanias *et al.* 2015; Kopanias and MacGinnis 2016; Stein and Alizadeh 2014) highlights the imprecise nature of the existing chronology, with dates for LC1-2 deposits floating between about 4800 BC and 3800 BC. Continued excavation in and radiocarbon dating of the LC deposits at Gird-i Rostam promise to make a fundamental contribution to the refinement of the Late Chalcolithic chronology of northern Mesopotamia in general and eastern Kurdistan in particular.

3. *the Assyrian impact on eastern Kurdistan* — Despite a wealth of epigraphic evidence (principally the annals of the Neo-Assyrian kings and a few random finds like the texts from Qalat-i Dinka [Radner 2015] and Tell Sitak [Radner 2017]) attesting to the Assyrian conquest of this region — particularly the land of Mazamua — the archaeological signature of that impact is poorly known. The short inscription found in 2018 at Gird-i Rostam points to a possible Assyrian presence at the site, presumably in the eighth/seventh centuries BC, but broader excavations are required in order to determine whether this is the case and, if so, what the nature of the Assyrian presence in the area may have been.

4. Gird-i Rostam and the Nestorian ecclesiastical province of Beth Garmai — As noted above, the latest strata at Gird-i Rostam yielded several die-stamped sherds showing Christian crosses with close parallels in northern Iraq (e.g. Nineveh, Tell Sitak, Khirbet Deir Situn). Given that northern Mesopotamia was home to a large Nestorian Christian population prior to the coming of Islam, particularly well-attested in the 4th century by the acts of martyrs persecuted by Shapur II (Shapur's persecution began on 5 September, 340 or 341; see Peeters 1925, 266, n. 1), this is not surprising. However, the sources on the archbishopric of Beth Garmai,<sup>5</sup> with its center at modern Kirkuk (Beth Slokh; Fiey 1965, 1968), are silent on the area of Bistan/Gird-i Rostam and more broadly Penjwin. Administratively subordinate to the province of Adiabene (Peeters 1925, 261), as it had been previously subject to the kingdom of Adiabene (Marquart 1907, 230), Beth Garmai's 'limits are roughly marked on the N. by the Awroman-Azmir-Kandilân mountains, by the Lower Zâb on the W., by the Hemrîn mountains on the S., and the Divalâ and Shirwân rivers on the E.' (Budge 1893, 44-45, n. 2; cf. Hoffmann 1880, 253; Jullien 2004, 147-148). The nearest known localities mentioned seem to be the region of Siārzūr/Σιαρσοῦρα/τό Σιάρξούρων, i.e. Shahrizor (Hoffmann 1880, 264-265; Nöldeke 1893, 17, n. 4; Altaweel et al. 2017, 15-16; Fiey 2009, 60, where the monk Sābā Gūšnazdād 'converted a number of Kurds and built many churches' in the fifth century), to the west, and the area around Paikuli (Henning 1952, 520), to the south. Thus, continued exposure of the latest occupation at the site will shed important light on the very poorly documented archaeology of the late pre-Islamic population, both Christian and pagan, of northern Mesopotamia.

<sup>&</sup>lt;sup>5</sup> Cf. Cl. Ptol., *Geog.* 6.1.6, Garamaioi; Streck 1910, 751 noted the Middle Persian form Garmakān/Garmēkān, and note the toponym *Garmik* or *Garmk* encountered several times in eastern Kurdistan, e.g. very close to Gird-i Rostam on the road from Penjwin and near Qaladize where a Garmikān is attested.

#### **Bibliography**

- Altaweel et al. 2012: M. Altaweel, A. Marsh, S. Mühl, O. Nieuwenhuyse, K. Radner, K. Rasheed and S. A. Saber, New Investigations in the Environment, History, and Archaeology of the Iraqi Hilly Flanks: Shahrizor Survey Project 2009-2011. *Iraq* 74, 1-35.
- Baldi, J. S. 2016a. Chalcolithic Ceramics from Logardan Trench D: Typological Features. In: R. Vallet (ed.), *Report on the Second Season of Excavations at Girdi Qala and Logardan*, 51-58. Sulaimaniyah.
  - —. 2016b. Chalcolithic Ceramics from Girdi Qala North Mound (Survey and Trench D): Typological Features. In: R. Vallet (ed.), *Report on the Second Season of Excavations at Girdi Qala and Logardan*, 113-120. Sulaimaniyah.
- Banse, E. 1919. Die Türkei: Eine moderne Geographie. Berlin/Braunschweig/Hamburg.
- Barge et al. 2018. O. Barge, H. Azizi Kharanaghi, F. Biglari, M. Moradi, M. Mashkour, M. Tengberg and C. Chataigner, Diffusion of Anatolian and Caucasian Obsidian in the Zagros Mountains and the Highlands of Iran: Elements of Explanation in 'Least Cost Path' Models. *Quaternary International* 467, 297-322.
- Billerbeck, A. 1898. Das Sandschak Suleimania und dessen persischen Nachbarlandschaften zur babylonischen und assyrischen Zeit. Leipzig.
- Bronk Ramsey, C. 1995. Radiocarbon Calibration and Analysis of Stratigraphy: The OxCal Program. *Radiocarbon* 37, 425-430.
- Budge, E. A. W. 1893. *The Book of Governors: The Historia Monastica of Thomas Bishop of Margâ A.D.* 840, vol. 2. London.
- Cameron, G. G. 1936. The History of Early Iran. Chicago.
- Chataigner, C. 1998. Sources des artefacts du Proche-Orient d'après leur caractérisation géochimique. In: M.-C. Cauvin, A. Gourgaud, B. Gratuze, G. Poupeau, J.-L. Poidevin and C. Chataigner (eds.), L'Obsidienne au Proche et Moyen-Orient : du volcan à l'outil, 273-324. BAR International Series 738, Oxford.
- Chataigner, C. and O. Barge. 2010. GIS (Geographic Information System) and Obsidian Procurement Analysis: Pathway Modelisation in Space and Time. In: S. Hansen, A. Hauptmann, I. Motzenbäkker and E. Pernicka (eds.), *Von Majkop bis Trialeti. Gewinnung und Verbreitung von Metallen und Obsidian in Kaukasien im 4.- 2. Jt.v.Chr.*, 1-14. Kolloquien zur Vor- und Frühgeschichte 13, Bonn.
- Chataigner, C., J. L. Poidevin, and N. O. Arnaud. 1998. Turkish Occurrences of Obsidian and Use by Prehistoric Peoples in the Near East from 14,000 to 6000 BP. *Journal of Volcanology and Geo*thermal Research 85, 517–537.
- Chataigner, C. and B. Gratuze. 2014. New Data on the Exploitation of Obsidian in the Southern Caucasus (Armenia, Georgia) and Eastern Turkey, Part 1: Source Characterization. *Archaeometry* 56, 25-47.
- Clément, A. 1866. Excursion dans la Kourdistan ottoman méridional de Kerkout à Ravandouz. *Mémoires de la Société de Géographie de Genève* 5, 184-195.
- Cooper, L., Z. Rijib, and S. Ahmed. 2012. Neo-Assyrian and Sasanian Pottery. In: R. Matthews and W. Matthews (eds.), Central Zagros Archaeological Project: Excavations at Bestansur Archive Report, 150-157. Reading.
- Curtis, J. E. 1997. The Church at Khirbet Deir Situn. Al-Rāfidān 18, 369-379.
- 2008: Observations on Selected Metal Objects from the Nimrud Tombs. In: J. E. Curtis, H. McCall, D. Collon and L. al-Gailani Werr (eds.), *New Light on Nimrud*, 234-253. London.
- Darabi, H. 2012. Towards Reassessing the Neolithisation Process in Western Iran. *Documenta Praehistorica* 39, 103-110.
- Directorate General of Antiquities 1970. Archaeological Sites in Iraq. Baghdad.
- Fiey, J. M. 1965. Assyrie chrétienne I: Contribution à l'étude de l'histoire et de la géographie ecclésiastique et monastiques du nord de l'Iraq. Beirut.
  - —. 1968. Assyrie chrétienne III. Bet Garmaï, Bet Aramāyé et Maišān nestoriens. Beirut.

——. 2009. The Christian pre-history of Turkish Hakkārī. Journal of Assyrian Academic Studies 23/2, 51-74.

Goff, C. 1971. Lūristān before the Iron Age. Iran 9, 131-152.

- Gratuze, B. 1999. Obsidian Characterisation by Laser Ablation ICP-MS and its Application to the Prehistoric Trade in the Mediterranean and the Near East: The Sources and Distribution of Obsidian within the Aegean and Anatolia. *Journal of Archaeological Science* 26, 869-881.
- Grayson, A. K. and J. Novotny. 2014. *The Royal Inscriptions of Sennacherib, King of Assyria (704-681 BC)*, Part 2. Winona Lake.
- Henning, W. B. 1952. A Farewell to the Khagan of the Aq-Aqatärān. BSOAS 14, 501-522.
- Hoffmann, G. 1880. Auszüge aus syrischen Akten persischer Märtyrer, übersetzt und durch Untersuchungen zur historischen Topographie erläutert. Abhandlungen für die Kunde des Morgenlandes 7/3, Leipzig.
- Howes Smith, P. H. G. 1986. A Study of 9th-7th Century Metal Bowls from Western Asia. Iranica Antiqua 21, 1-88.
- Hunt, A. M. W. 2015. Palace Ware across the Neo-Assyrian Imperial Landscape: Social Value and Semiotic Meaning. Leiden/Boston.
- Hussein, M. M. 2016. Nimrud: the Queens' Tombs. Chicago.
- Jones, J. D. 2005. Glass Vessels from Gordion: Trade and Influence along the Royal Road. In: L. Kealhofer (ed.), *The Archaeology of Midas and the Phrygians: Recent Work at Gordion*, 101-116. Philadelphia.
- Jullien, C. 2004. Contribution des Actes des Martyrs perses à la géographie historique et à l'administration de l'empire sassanide. In: R. Gyselen (ed.), Contributions à l'histoire et la géographie historique de l'Empire sassanide. Res orientales 16, 81-102. Bures-sur-Yvette.
- Keall, E. J. and M. J. Keall. 1981. The Qal'eh-i Yazdigird Pottery: A Statistical Approach. *Iran* 19, 33-80.
- Khalidi et al. 2016: L. Khalidi, B. Gratuze, G. Stein, A. McMahon, S. Al-Quntar, R. Carter, R. Cuttler, P. Drechsler, E. Healey, M.-L. Inizan, D. Mouralis, E. Pernicka and A.-K. Robin, The Growth of Early Social Networks: New Geochemical Results of Obsidian from the Ubaid to Chalcolithic Period in Syria, Iraq and the Gulf. *Journal of Archaeological Science: Reports* 9, 743–757.
- Kopanias, K. and J. MacGinnis. 2016. The Archaeology of the Kurdistan Region of Iraq and Adjacent Regions. Oxford.
- Kopanias, K., J. MacGinnis, and J. Ur. 2015. Archaeological Projects in the Kurdistan Region of Iraq. Erbil.
- Marquart, J. 1907. Untersuchungen zur Geschichte von Eran II (Schluß). *Philologus Supplementband* 10, 1-258.

Nöldeke, T. 1893. *Die von Guidi herausgegebene syrische Chronik*. Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, phil.-hist. Cl. 128, Wien.

- Peeters, P. 1925. Le 'Passionaire d'Adiabène.' Analecta Bollandiana 43, 261-304.
- Peyronel, L. and Vacca, A. 2015. Northern Ubaid and Late Chalcolithic 1-3 Periods in the Erbil Plain: New Insights from Recent Researches at Helawa, Iraqi Kurdistan, *Origini* 37, 89-127.
- Puschnigg, G. 2006. Ceramics of the Merv Oasis: Recycling the City. Walnut Creek CA.

Radner, K. (ed.) 1998. The Prosopography of the Neo-Assyrian Empire 1/I: A. Helsinki.

Radner, K. 1998-2001. Eine Bronzeschale mit neuassyrischer Inschrift. SAAB 13, 17-25.

—. 2015. A Neo-Assyrian Slave Contract of 725 BC from the Peshdar Plain and the Location of the Palace Herald's Province. ZA 105, 192-197.

- —. 2017. A Neo-Assyrian Legal Document from Tell Sitak. In: Y. Heffron, A. Stone, and M. Worthington (eds.), At the Dawn of History: Ancient Near Eastern Studies in Honour of J. N. Postgate, 423-430. Winona Lake IN.
- Reimer et al. 2013: P. J. Reimer, E. Bard, A. Bayliss, J. W. Beck, P. G. Blackwell, C. Bronk Ramsey, C. E. Buck, H. Cheng, R. L. Edwards, M. Friedrich, P. M. Grootes, T. P. Guilderson, H. Haflidason, I. Hajdas, C. Hatte, T. J. Heaton, D. L. Hoffmann, A. G. Hogg, K. A. Hughen, K. F. Kaiser, B. Kromer, S. W. Manning, M. Niu, R. W. Reimer, D. A. Richards, E. M. Scott, J. R. Southon, R. A. Staff, C. S. M. Turney and J. van der Plicht, IntCal13 and Marine13 Radiocarbon Age Calibration Curves, 0–50000 Years Cal BP. Radiocarbon 55, 1869–1887.

Rich, C. J. 1836. Narrative of a Residence in Koordistan..., vol. 1, London.

- Robin et al. 2016: A.-K. Robin, D. Mouralis, E. Akköprü, B. Gratuze, C. Kuzucuoğlu, S. Nomade, A. Pereira, A. F. Doğu, K. Erturaç and L. Khalidi, Identification and Characterization of Two New oObsidian Sub-Sources in the Nemrut Volcano (Eastern Anatolia, Turkey): The Sıcaksu and Kayacık Obsidian. *Journal of Archaeological Science: Reports* 9, 705-717.
- Rödiger, E. and A. F. Pott. 1840. Kurdische Studien. Zeitschrift für die Kunde des Morgenlandes 3, 1-63.
- Saber, S. A., H. Hamza, and M. Altaweel. 2010. Report on the Excavations at Tell Sitak: The 2010 Season, unpubl. report.
- Searight, A., J. Reade, and I. Finkel. 2008. Assyrian Stone Vessels and Related Material in the British Museum, Oxford.
- Simpson, St. J. 1996. From Tekrit to the Jaghjagh: Sasanian Sites, Settlement Patterns and Material Culture in Northern Mesopotamia. In: K. Bartl and S. R. Hauser (eds.), *Continuity and Change in Northern Mesopotamia from the Hellenistic to the Early Islamic Period*, 87-126. BBVO 17, Berlin.
- —. 2013. Rams, Stags and Crosses from Sasanian Iraq: Elements of a Shared Visual Vocabulary from Late Antiquity. In: A. Peruzzetto *et al.* (eds.), *Animals, Gods and Men from East to West: Papers on Archaeology and History in Honour of Roberta Venco Ricciardi*, 103-117. BAR International Series 2516, Oxford.
- Soane, E. B. 1912. Notes on a Kurdish Dialect, Sulaimania (Southern Turkish Kurdistan). JRAS (October), 891-940.
- Stein, G. and A. Alizadeh. 2014. Surezha, Kurdistan. *The Oriental Institute Annual Report 2013-2014*, 133-146.
- Streck, M. 1910. Garamaioi. RE 13, 750-751.
- Tobler, A. J. 1950. Excavations at Tepe Gawra, vol. 2. Philadelphia.
- Wasylikowa et al. 2006: K. Wasylikowa, A. Witkowski, A. Walanus, A. Hutorowicz, S. W. Alexandrowicz and J. J. Langer, Palaeolimnology of Lake Zeribar, Iran, and its Climatic Implications. *Qua*ternary Research 66, 477-493.
- Wedepohl, K. H. 1995. The Composition of the Continental Crust. *Geochimica and Cosmochimica Acta* 59, 1217-1232.