TO

DOMENICO FACCENNA

This issue is dedicated in commemoration on the centenary of His birth,
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Gawr Tepe, A New MiSAK Project in Iraqi Kurdistan

by Luca Colliva, Serenella Mancini, Salih Mohammed Sameen

Nel 2023, la MiSAK, Missione Storico-Archeologica Italiana in Kurdistan, ha avviato un nuovo progetto dedicato allo studio e alla valorizzazione del sito di Gawr Tepe nella Regione Autonoma del Kurdistan in Iraq (KRI). Gawr Tepe, situato a circa 8 km a sud di Kalar, è identificato come un vasto insediamento abitato almeno dal periodo sasanide al periodo Islamico. La prima campagna a Gawr Tepe ha visto la realizzazione di un dettagliato rilievo topografico e l'avvio della raccolta sistematica dei materiali archeologici di superficie. I dati preliminari raccolti confermano un'occupazione continua dell'area almeno dal periodo sasanide al XIII secolo EC. Particolarmente significativi sono il ricco corpus ceramico e gli stucchi che probabilmente ornavano il palazzo.

MiSAK, the Italian Historical and Archaeological Mission in Kurdistan, was founded in 2021 by ISMEO—The International Association for Mediterranean and Oriental Studies and the International Institute of Kurdish Culture in Rome (IICK).[1] Its primary objective is active engagement in studying, preserving, and enhancing Kurdish cultural heritage. Since its inception, the mission has been actively involved in the Autonomous Region of Iraqi Kurdistan (KRI) and in particular in the Garmian area of the Sulaimaniyah Governorate.

In September 2023, ISMEO, IICK and MiSAK entered into a triennial agreement with the KRG General Directorate of Antiquities and Heritage and the Garmian Directorate of Antiquities for the archaeological exploration and excavation of Gawr Tepe.[2] This project is part of a diachronic and multidisciplinary study of the archaeological

[1] All the MiSAK activities are realised thanks to the patronage of ISMEO and IIKC and the contributions of MAECI, Ministry of Foreign Affairs and Italian Development Cooperation, and the Alma Mater Studiorum University of Bologna (AlmaScavi 2022 and 2023). MiSAK would also like to thank the Italian Embassy in Baghdad and the Italian Consulate in Erbil for their continuous assistance; H.E. the Governor of Sulaimaniyah, Dr Haval Abubakir, for his support; the ASOR, American Society of Overseas Research, for its endorsement; the Department of Cultural Heritage of the Alma Mater Studiorum University of Bologna, the "Geophysics Laboratory" of the University of Roma Tre, and the "PAST - Public Archaeology and Social Transmission" of the University of Bologna, Ravenna Campus, for their precious collaborations. The MiSAK team and in particular the scientific director of the mission, Dr Luca Colliva, and the Project Manager for the Study of the Islamic Period in Gawr Tepe, Dr Serenella Mancini, would like also to thank the ISMEO President, prof. Adriano V. Rossi; the IICK president, Soran Y. Ahmad; the KRG Director General of Antiquities and Heritage, Kaifi Mustafa Ali, the Garmian Antiquities Director, Salih Mohammed Sameen, the director of the Garmian Civilization Museum, Sarwat H. Majeed, and their teams for their invaluable and continuous support.

[2] This agreement supplements the previous one signed in December 2021, focusing on the historical and archaeological exploration, protection, and enhancement of the Sarqala site, located approximately twenty-six kilometres North-West of Kalar in the Garmian district (see ISMEO Activities in this volume; on MiSAK's activities in Sarqala see also: Colliva et al. 2022; Colliva 2023).

Fig. 1 - The Garmian region with the location of the two archaeological sites investigated by MiSAK, Gawr Tepe and Sarqala. Photo © Google Earth, graphic processing by MiSAK2023—G. Giubergia.

landscape during the historical period in the Garmian area, which stands as one of the main research topics on which MiSAK's archaeological activities are focused.

Gawr Tepe is an archaeological site of paramount importance located in the Khani Masi plain, almost eight kilometres South of Kalar, in the Kurdistan Region of Iraq (KRI) (Fig. 1). Previously surveyed in the first half of the last century by Iraqi archaeologists (General Directorate of Antiquities 1976: pl. 58) and more recently by an archaeological mission from Glasgow University as part of the Sirwan Regional Project (Casana-Glatz 2017: 12-15 and related bibliography), has yet to be systematically studied.

The MiSAK project aims to shed light on its historical significance and its role during the Sasanian and Islamic periods, through a diachronic and multidisciplinary analysis of the historical and archaeological data.[3]

The site has several conservation issues due to agricultural work, already partly visible on CORONA satellite photos from the second half of the last century, and to clandestine excavations, traces of which are clearly visible on the surface of the two main *tell*s, Gawr Tepe A and Gawr Tepe B.[4] For this reason, as well, MiSAK's research

[3] Modern archaeological projects are necessarily group works, and as such the authors would like to remember and thank for their valuable work all the MiSAK members who took part in the first campaign at Gawr Tepe: the archaeologists Domenico Andreucci, Veronica Castignani and Anastasia Vicari, the restorer Alice Musarò and the Alma Mater Studiorum University of Bologna student of the Master's Degree in Archaeological, Artistic and Landscape Heritage: History, Protection and Enhancement, Giulia Giubergia. Our deep thanks also go to the archaeologists of the Garmian Directorate of Antiquities and Heritage, who collaborated with us in this project: Nawzad Abdullatif Abdul-Karim and Hoshyar Hassan.

[4] See below § *Gawr Tepe site.*

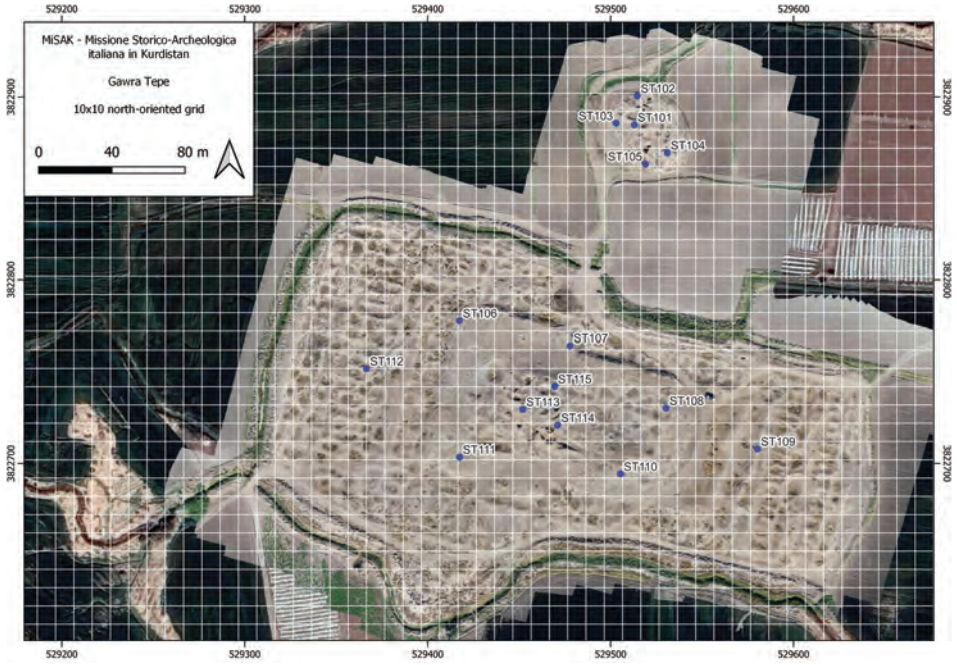

Fig. 2 - Gawr Tepe, the orthomosaic with GCPs and 10×10 m grid. Graphic processing by MiSAK2023—V. Castignani.

activities are closely connected to protection and enhancement interventions, not only for the site but also for the associated Garmian Civilization Museum of Kalar. Moreover, planned dissemination and awareness-raising activities are directed towards the local population.

MiSAK's investigations on Gawr Tepe during the 2023 initial campaign comprised a topographic survey of the site and a systematic collection of surface materials. Preliminary data collected so far suggest a continuous occupation of the area from at least the Sasanian period to the 13th century CE and confirm the importance of this site in the historical and archaeological landscape of the region between the Sasanian and Middle Islamic periods.

LC, SM, SMS

The Site of Gawr Tepe

Gawr Tepe has been identified as a large Sasanian and Early-Middle Islamic settlement of at least 48 ha.[5] It includes two central *tell*s, Gawr Tepe A and Gawr Tepe B (Figs 2-3), the only ones so far studied by MiSAK, but several other mounds are scattered over an area of about five square kilometres. We cannot rule out that at least

[5] On the subdivision within the Islamic period, reference is made to the chronological sequence proposed by D. Whitcomb.

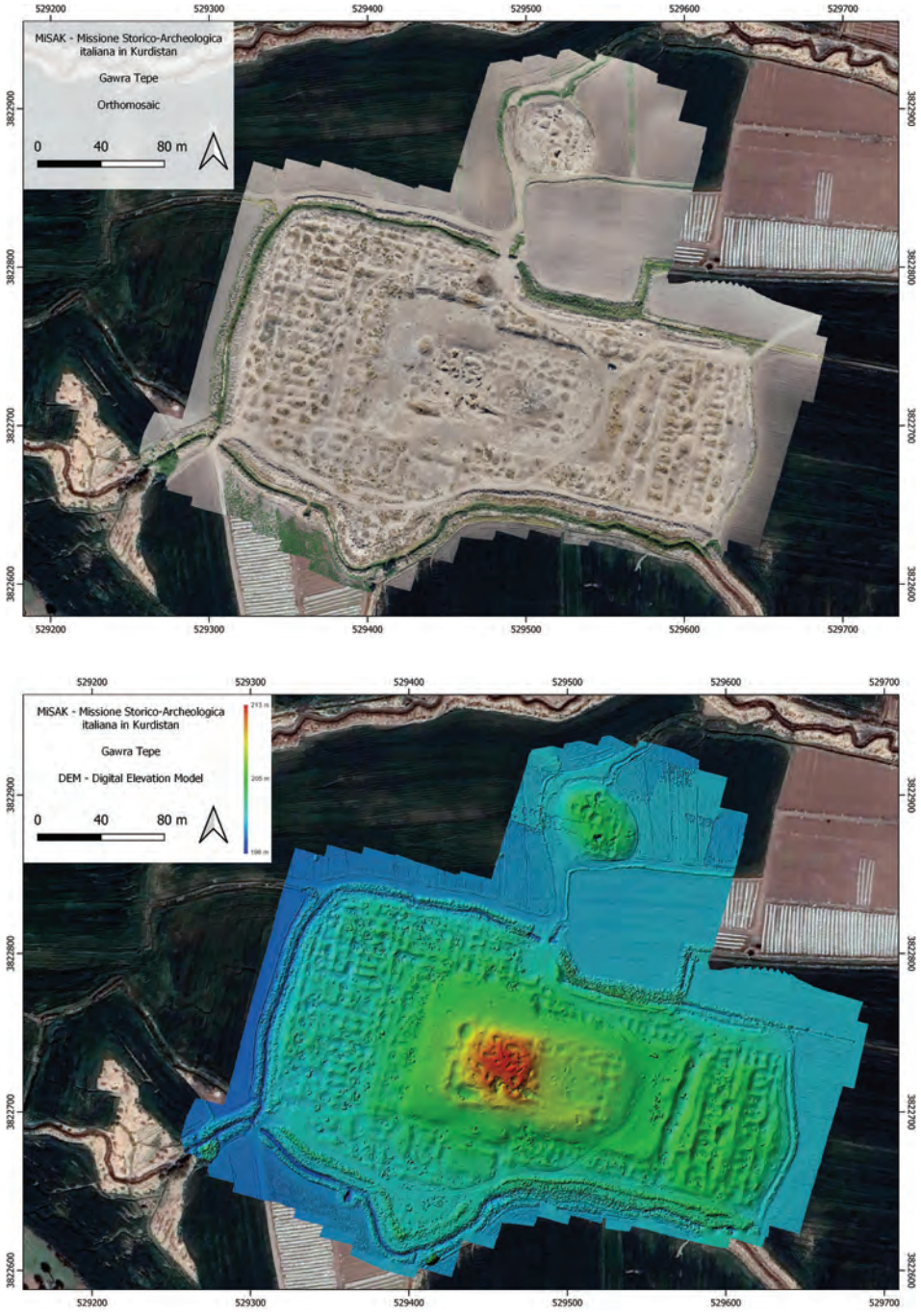

Fig. 3 - Gawr Tepe, the orthomosaic and the Digital Elevation Model (DEM). Graphic processing by MiSAK2023—V. Castignani.

some of these *tell*s were part of the same settlement. In fact, a preliminary survey confirmed a continuous presence of surface archaeological material in an area of at least 2 km radius from Gawr Tepe A.

The main *tell* of the site (Gawr Tepe A), of about 5.25 ha, exhibits traces of an imposing building of approximately 300 m E-W and 200 m N-S, preliminary identified with a palace (Casana-Glatz 2017: 12-15). The still visible remains show baked brick (about 30×30×8 cm) wall structures bound by strong mortar. Several vaulted corridors are attested among the identifiable structures. Remnants of plaster, which on preliminary optical analysis appears white, are visible throughout the area.

The supposed palace was probably established in the Sasanian period, stating shape, masonry technique and close comparison with the nearby Sasanian palace of Hawsh-kurw, although the latter is mainly made of stone blocks bound with mortar.[6] Still, the surface material also suggests a significant occupation during at least the Early and Middle Islamic period.

North of the main one, a second *tell* of about 0.25 ha, named Gawr Tepe B, shows the remains of a possible second building, which is clearly visible and certainly connected to the building on Gawr Tepe A, given the similarity in construction techniques and materials found on the surface.

Several fragments of stucco architectonical decoration have been found in both *tell*s, suggesting the presence of an impressive decorative stucco apparatus likely used in both buildings (see Figs 12-13, 15-16 and Tab. 1).[7]

SM

MiSAK Topographic Survey at Gawr Tepe

The MiSAK 2023 season involved a preliminary topographic survey of the archaeological site of Gawr Tepe, with a particular focus on the main *tell*, Gawr Tepe A, and the small *tell* further North, Gawr Tepe B. The person in charge of the topographic survey, as well as geo-spatial data management and the creation and supervision of the GIS platform is MiSAK archaeologist and topographer Veronica Castignani, who worked together with the archaeologist and topographer of the Garmian Antiquities Department, Hoshyar Hassan.

The topographic documentation included an initial GNSS (Global Navigation Satellite System) and Total Station survey,[8] followed by the unmanned aerial photogrammetric survey of the two mounds.[9]

[6] Abian, Mafi 2022 and related bibliography.

[7] The detailed analysis of the stuccoes is still in progress. However, an initial stylistic study of the decorations and a preliminary optical analysis of the collected stucco, mortar, and plaster fabrics seem to suggest at least two different productions (see *infra*, § *Stucco Productions Attested in Gawr Tepe*). Given a well-attested and certainly not secondary occupation of the area in the Islamic period (see *infra* § *Significant Ceramic Production Attested at Gawr Tepe*), it cannot be ruled out that one of these two hypothetical productions may be connected to the Islamic phase of the site.

[8] The total station utilised is the Trimble 5605 DR 200+.

[9] The UAV employed is the DJI Phantom 4. We extend our gratitude to our colleague Nawzad Abdullatif Abdul-Karim of the Garmian Antiquities Directorate for conducting the required flights on our behalf.

The primary purposes of the topographic survey included producing a high-resolution georeferenced base map for collecting and managing geospatial data. Additionally, the survey aimed to establish a network of real-world coordinate points to support current and future archaeological investigations.

Fifteen ground control points (GCP) were strategically positioned, with ten allocated to Gawr Tepe A and five to Gawr Tepe B. These GCPs served the dual purpose of establishing a permanent topographic network and accurately positioning the surveyed area. Additionally, a 10×10 m North-oriented grid was laid out using the ground control points. The grid was required to systematically collect the archaeological surface material (Fig. 2).

To contextualise archaeological and topographic data in a GIS platform, a satellite imagery database, freely provided by Google, Esri and Bing, was initially consulted. An aero-photogrammetric survey was also conducted to increase the base map's resolution. The survey took place at a flying altitude of 45 m and captured 449 images; the flights covered an area of 9.38 ha and achieved in post-processing a ground resolution of 1.13 cm/pix. The photogrammetric documentation resulted in an accurate point cloud of the archaeological site, from which a high-resolution 3D model will be built. Two-dimensional outputs were generated as well, including the orthomosaic and the Digital Elevation Model (DEM) of the survey area (Fig. 3).[10]

Furthermore, an analysis of declassified CORONA satellite images (KH-4B series, acquired in 1969) enabled the observation of landscape transformations over the past decades, revealing the aggressive impact of land exploitation since the late 1960s, which also almost completely obliterated the remains of a modern village still clearly visible in the CORONA satellite images (Fig. 4).

LC

Systematic Collection of Surface Archaeological Material

The topographic survey was accompanied by the beginning of a systemic collection of the surface archaeological material that, in the authors' plans, will continue in the coming years and will investigate all the most significant areas of the site.

The applied methodology closely mirrors that previously employed by MiSAK at Sarqala (Colliva *et al.* 2022). Surface materials are gathered within a 10×10 m North-oriented grid to capture data on the spatial distribution of sherds. However, given the evident anthropogenic traces on the surface of the two investigated *tell*s, largely linked to agricultural and pastoral activities, many fragments are likely in secondary deposition.

Within the grid quadrants, all ceramic material and stone fragments with discernible craft traces are collected. Metal objects and glasses are considered only if their contemporaneity is unclear, while bones, within the context of a surface material study, are taken into account only if displaying signs of working or use as a tool.

Of the very large number of fired bricks and mortar fragments on the surface, only a few significant samples were collected. However, all stucco fragments showing traces of decoration have been gathered.

In the initial MiSAK campaign of Fall 2023, 32 quadrants were investigated, 13 in Gawr Tepe A and 19 in Gawr Tepe B (Fig. 5 and Tab. 1). While the collected data

[10] Veronica Castignani is currently preparing a comprehensive preliminary report encompassing the entire topographic survey and its results. It is anticipated that the publication will be released by fall 2024.

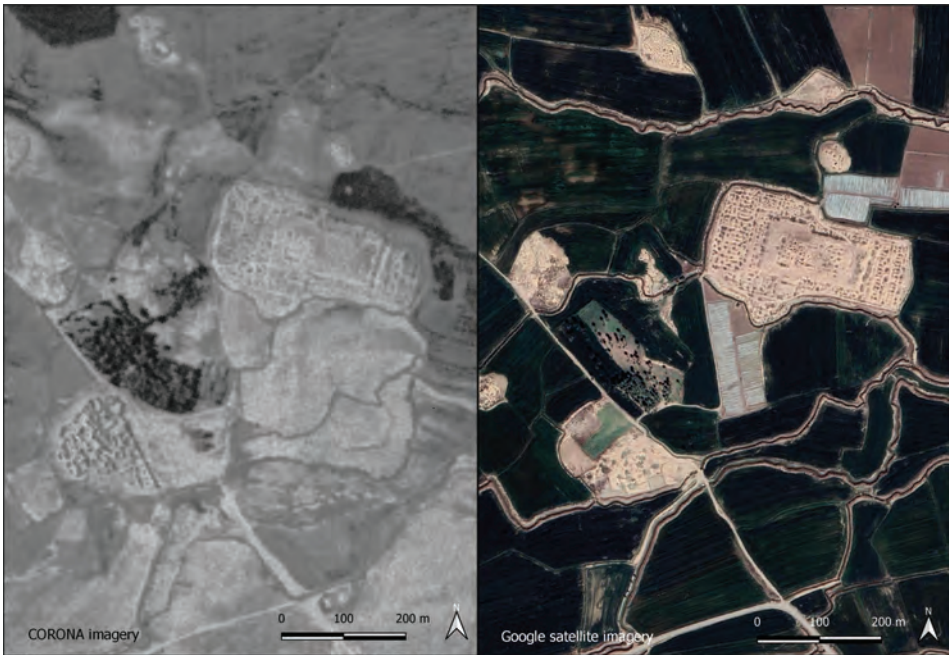

Fig. 4 - Gawr Tepe, the Corona image (1969) and a recent Google Earth image. Graphic processing by MiSAK2023—V. Castignani.

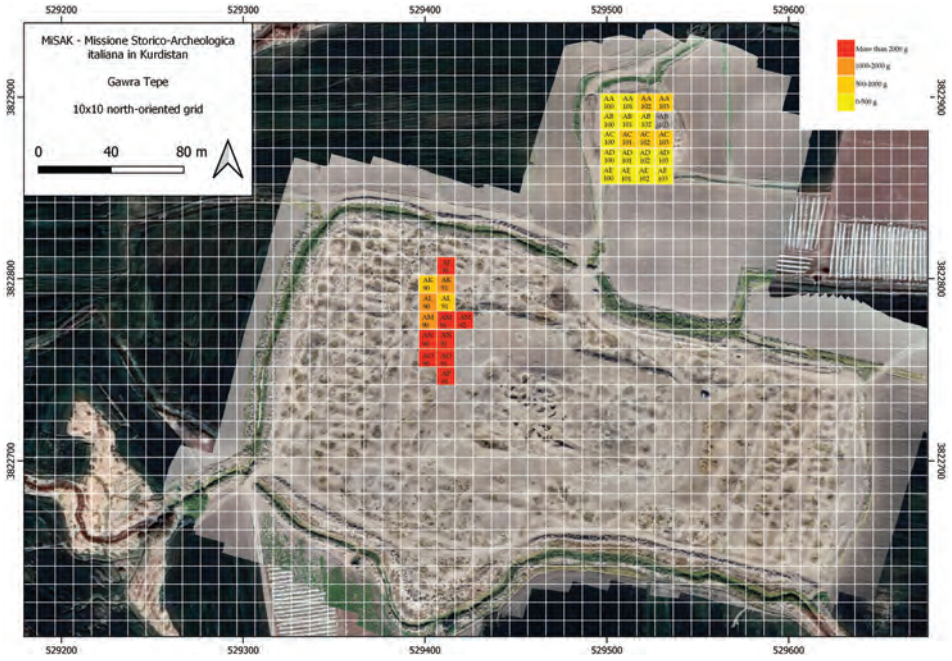

Fig. 5 - Gawr Tepe, the quadrants investigated during the Fall 2023 campaign, with a graphic display of the amount of pottery found (weight, see Tab. 1. Graphic processing by MiSAK2023—V. Castignani, L. Colliva.

are still preliminary and undergoing study, the quantity and quality of collected materials underscore the significance of the site. Data on the distribution of the fragments are still insufficient for an overall analysis, but an expected and significant progressive increase in material as one approaches the centre of the site is evident as of now.

TABLE 1

MISAK 2023—Gawr Tepe Project—Surface Materials.

Tell	Quadrant	Pottery Weight	Other Materials	Investigation Date
GTA	**AJ091**	6,1 kg		08/11/2023
GTA	**AK090**	900 gr		08/11/2023
GTA	**AK091**	1,5 kg		08/11/2023
GTA	**AL090**	1,9 kg		08/11/2023
GTA	**AL091**	550 gr		08/11/2023
GTA	**AM090**	1,75 kg		08/11/2023
GTA	**AM091**	4,25 kg	Metal fr.	08/11/2023
GTA	**AM092**	2,25 kg		08/11/2023
GTA	**AN090**	4,15 kg		08/11/2023
GTA	**AN091**	2,77 kg		08/11/2023
GTA	**AO090**	4,5 kg		02/11/2023
GTA	**AO091**	2,75 kg	Bronze fr.	02-08/11/2023
GTA	**AP091**	2,1 kg	Lithics,	02/11/2023
GTB	**AA100**	250 gr		31/10/2023
GTB	**AA101**	125 gr	Baked brick fr.	31/10/2023
GTB	**AA102**	750 gr	Stucco fr.	31/10/2023
GTB	**AA103**	670 gr		31/10/2023
GTB	**AB100**	50 gr	Baked brick fr.	31/10/2023
GTB	**AB101**	70 gr	Stucco fr.	31/10/2023
GTB	**AB102**	325 gr	Stucco fr.	31/10/2023
GTB	**AC100**	150 gr	Lithics	01/11/2023
GTB	**AC101**	600 gr		01/11/2023
GTB	**AC102**	550 gr	Bronze fr.	01/11/2023
GTB	**AC103**	800 gr	Baked brick fr.	01/11/2023
GTB	**AD100**	200 gr		01/11/2023
GTB	**AD101**	200 gr		01/11/2023
GTB	**AD102**	0	Stucco fr.	01/11/2023
GTB	**AD103**	225 gr	Stucco fr.	01/11/2023
GTB	**AE100**	260 gr	Stucco fr.	02/11/2023
GTB	**AE101**	200 gr	Stucco fr.	02/11/2023
GTB	**AE102**	100 gr		02/11/2023
GTB	**AE103**	50 gr		02/11/2023

LC

During the systematic survey at Gawr Tepe, a considerable number of ceramic sherds were collected. A first examination of the ceramic materials made it possible to identify 563 diagnostic fragments, specifically those exhibiting pertinent technological, decorative, and morphological characteristics (Colliva, Mancini 2021: 148; 2023: 934-935).

Several collected sherds exhibit technological features associated with both the Sasanian and Islamic periods. Most of the pottery discovered thus far falls within the unglazed ware class, posing a significant challenge in chronological attribution. This challenge is worsened by the scarcity of specific studies on these artefacts from reliable archaeological contexts in the area, hindering precise dating from material out of a specific archaeological context.

Nevertheless, some of the identified productions are well-documented in existing scientific literature, showcasing a wide variety between the ware productions attested in Gawr Tepe. Some fragments demonstrate exceptional refinement, as evidenced by collected glazed fragments.

Unglazed Ware

Most of the corpus collected so far consists of unglazed ceramics. *Unglazed plain ware*, *Unglazed ware with incised and carved decoration*, and *Unglazed ware with applied and impressed decoration* are mainly attested.

Unglazed plain ware exhibits fragments morphologically belonging to medium-sized jugs and jars; however, the extremely fragmented state has not allowed for a detailed study. Most of them are produced with light colours (beige, light yellow, light brown) of medium to medium/coarse fabrics. Few fragments are distinguished as unglazed fine plain ware, produced with fine compact fabric, always of light colour, seemingly attributable to closed vessels.

Unglazed ware with incised and carved decoration is undoubtedly the most extensively identified production. All the fragments belong to closed forms, primarily produced, at least from a macroscopic observation, with the same medium to medium/coarse fabric as *Unglazed plain ware*. The incised and carved decorations are highly varied. The most attested is the incision with wavy combing (139 fragments), which exhibits varying degrees of precision. Sometimes, the incised parallel lines are very thin and barely noticeable, while they are deep and thick at other times. The incised decoration is sometimes associated with carved or impressed decoration (always made with the same tool) to create simple geometric patterns that develop on the surface of the object's body.

The *Unglazed ware with applied and impressed decoration* is the less attested. It could be usually associated with incised decoration, as shown by some slight segments of linear segments on some small sherds. The fragments probably belong to medium-sized jars. The decoration consists of a thin strip of clay applied at the neck-shoulder junction, featuring slight impressions (fingerprints) that create a relief pattern. Providing a precise chronological attribution for these materials is still not possible.

Fig. 6 - Sporadic wall of *Sasanian stamped ware* from Gawr Tepe. Photo by MiSAK2023—S. Mancini.

Among the materials that arouse particular interest is a fragment of *Sasanian stamped ware* (sporadic,[11] Fig. 6). The fragment, produced with a beige medium/coarse fabric characterised by the consistent presence of medium and small glassy, black and brown inclusions, bears an impressed decoration: two closely spaced circular impressions reveal a partially discernible depiction of a quadruped, likely a caprid. In one impression, all four legs with hocks are distinctly evident, as is a lunar crescent near the tip of the animal's tail; in the other impression, only a portion of an animal's horn and a fragment of the ribbon typically found around the animal's neck are identifiable. This production is dated to the Sasanian period; while recognised as a crucial chronological indicator, the fragmented nature of this material unearthed in various archaeological contexts has thus far hindered a comprehensive analysis of the meaning and function of the distinctive impressed decoration it bears (Simpson 2022: 257, 267).

Twelve ceramic fragments found from various squares (squares AN91, AM93, AM91, AJ91, AO90, AL87, AL91, and sporadic locations) can be associated with large storage jars provided with a distinctive decoration technique involving the application of a clay mixture, more liquid than the one used in the object's production, which is then modelled to produce a coarse surface. Still fresh, this clay layer can be further worked on to realise a different decorative motif as a honeycomb pattern. This production was usually identified as "*Honeycomb ware*" (Adams 1981: 234) and was traditionally considered a fossil type from the Sasanian period. Nevertheless, Simpson proposed a reclassification of it, suggesting a different chronological attribution be-

[11] The term "sporadic" refers to ceramic fragments that were collected by colleagues of the Garmian Directorate of Antiquities at times preceding the activities conducted by MiSAK on the site but were nonetheless included in the study.

Fig. 7 - Storage jars fragments of *Smeared ware* with different decorations from Gawr Tepe, from squares AN91, AM93, AM91, AJ91, AO90, AL87, AL91, and sporadic. Photo by MiSAK2023—A. Vicari.

tween the objects characterised by uniform "honeycomb" impressions covering the entire vessel surface, dated to the Early Islamic period, and others characterised by finger impressions realising irregular decorative patterns like wavy ruffle/rippling also attested in the late Sasanian Period ("*Smeared ware*") (Simpson 1996: 100; Kennet 2004: 80-81).

In Gawr Tepe, we found some fragments with the typical honeycomb pattern, several fragments that lack a clearly defined decorative motif, displaying non-uniform smears of the clay mixture, and fragments that show both decorations side by side (Fig. 7).

Due to the fragmentary status of the material, conducting a more extensive study to explore deep potential decorative and chronological variations is not feasible. Consequently, the decision was made to preliminarily classify these fragments as *Smeared ware* and propose a dating range from the late Sasanian to the early Islamic periods (late 7th to 9th century) (Nováček 2022: 135-139; Tonghini 2022: 143-145).

Another interesting fragment was found in square AM91, it is a part of the neck of an *Unglazed relief ware* belonging to a large jar characterised by a considerable decorative richness. The decorations are executed using multiple techniques, namely applied, modelled, and incised decoration. The *Unglazed relief ware*'s production area is unknown; however, it is supposed to be located in the Euphrates Valley, northern

Syria, and northern Iraq. The chronological attribution of this production dates to the 12th-13th century (Colliva, Mancini 2021: 150).

Moreover, three fragments of *Moulded relief ware* were also collected (squares AN91, AO90). Its walls exhibit the characteristic relief decoration created using moulds, displaying hints of motifs that could be described as pseudo-vegetal. The chronological attribution of this production spans a wide range, from the 9th to the 14th century, with internal distinctions primarily based on the complexity of the decoration realised on the artefact. The reduced size of the fragments discovered at Gawr Tepe, along with their level of alteration, prevents conducting a more precise decorative study and consequently provides a more condensed chronological attribution.

Glazed Ware

The glazed ware constitutes approximately 36,2% of the entire ceramic material collected during the first campaign at Gawr Tepe.

The *Monochrome turquoise ware* (150 fragments) is the most extensively attested production. The fragments feature a transparent turquoise glaze, which, in rare cases, is perfectly preserved. Alterations are very common and clearly visible due to the presence of whitish patinas, iridescence, and changes in the original colour, which tends to lighten more and more until it becomes completely white when the alteration process is significantly advanced. Both open forms, such as medium-sized bowls with a disk base, and closed forms, such as medium jugs, are attested. The chronological assignment of monochrome turquoise ware is a topic of extensive discussion and still remains unresolved.[12]

Three glazed fragments are particularly noteworthy as they can be attributed to the so-called "Samarra Horizon:" a small wall fragment of a *Polychrome lustre ware* (square AN90; Fig. 8) and two fragments of *Opaque ware with blue painted decoration*: a base (square AM91), clearly attributable to an open form that features an opaque white glaze significantly deteriorated and traces of paint above it barely visible, and a wall (square AM91) of an open form where the painted blue vegetal motif is still evident (Fig. 9).

These three are made with the typical extremely fine light-yellow fabric.[13] These productions can be dated to the 9th-10th centuries.

Eight wall fragments of open forms (squares AN90, AN90, AK90, AZ110, AT113, AV93, AP91, and sporadic; Fig. 10) belong to the *Opaque white splashed ware*. They are produced with a compact light brown fabric with sporadic very fine inclusions. The decoration mostly consists of turquoise splashes; more rarely, polychromy is ob-

[12] This production is one of the most widespread territorially and is documented from the Parthian period to the Islamic period. Technological and morphological continuity complicates this production's ongoing study, making it challenging to identify its chronological placement accurately, especially when a clear archaeological context is missing (Colliva, Mancini 2021: 151).

[13] Probably produced in the Basra area. However, a more in-depth study of the various production centres established during the Abbasid period is still incomplete. See Mason 1991; 1997; Mason, Keall 1991; Hallett 2010; 2021; Priestman 2011.

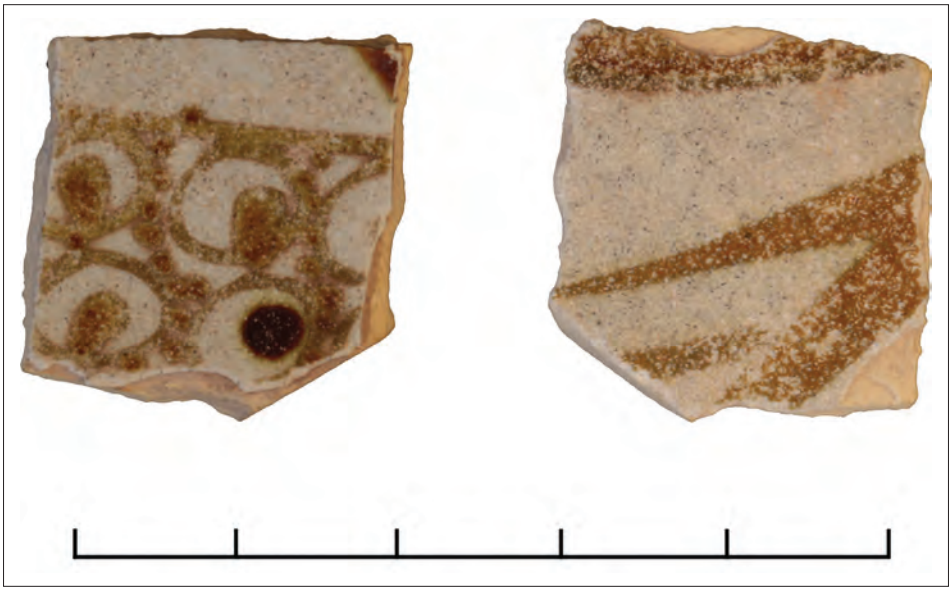

Fig. 8 - Wall of *Polychrome lustre ware* from Gawr Tepe, from square AN90. Photo by MiSAK2023—A. Vicari.

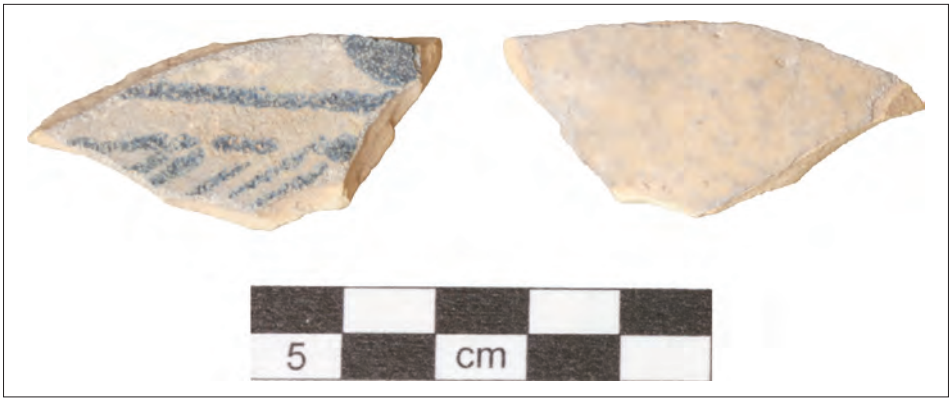

Fig. 9 - Wall of *Opaque ware with blue painted decoration* from Gawr Tepe, from square AM91. Photo by MiSAK2023—A. Vicari.

served with the association of dark brown/purple splashes. This production can be dated to the 9th-10th century.[14]

Another ceramic production found is *Sgraffiato ware* (Square AU111), with only one surviving fragment identified so far. It is crafted from a compact light orange/brown fabric with fine inclusions and likely belongs to an open form, possibly a bowl,

[14] This production appears closely linked to others sharing similar characteristics, as observed in Siraf and Estakhr (Iran) sites, see Tampoe 1989: 33-36, figs 283-284; Priestman 2011; Fusaro 2018; Mancini 2020.

Fig. 10 - Sporadic wall of *Opaque white splashed ware* from Gawr Tepe. Photo by MiSAK2023—A. Vicari.

with a decoration incised onto a white slip under a transparent yellow monochrome glaze. The decorative elements consist of curved incisions and spirals.

The proposed dating for this material spans from the 12th to 13th century, extending up to the 14th century. During this timeframe, these productions appear to have ceased entirely across Iraq, Iran, and Central Asia (Nováček 2009; Colliva, Mancini 2021: 152).

Finally, it is worth noting the discovery of a fragment of wall made with a compact white stonepaste. The sherd, belonging to a closed form, features a decoration created with black slip and sgraffito decoration under turquoise glaze (Fig. 11) and it could be related to the so-called *Silhouette ware* documented in both Iran and Syria between the 12th and 13th centuries (Rugiadi 2016: 185-187).

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Stucco Productions Attested in Gawr Tepe

During the survey, several decorative stucco fragments were also collected both in Gawr Tepe A and Gawr Tepe B (see Tab. 1).

Among these fragments, some have recognisable decorative elements that can be traced back to Sasanian period productions, but others have also possible comparisons with Islamic period productions as well.[15]

One of the fragments found (GT ST70567, square AM91, Fig. 12) has a wide curved frame enclosing a row of round beads.[16]

[15] See also fn. 7.

[16] The cornice has a width of about 3 cm, the beads have a diameter of about 3 cm. The decoration is mutilated, and it is impossible to say whether a second strand of beads was present as in the possible comparison after Kröger (1982: 187-188, pl. 75.2).

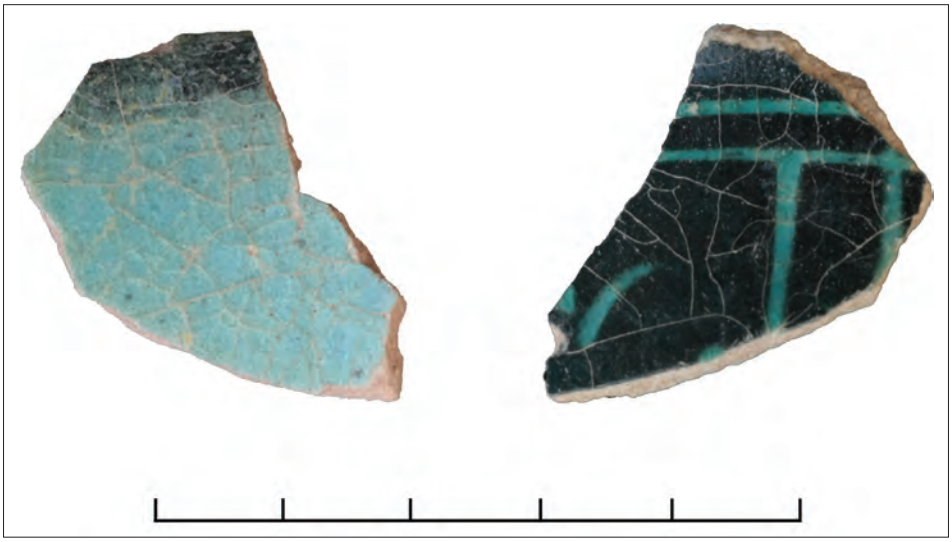

Fig. 11 - Wall of *Silhouette-ware* from Gawr Tepe, from square AO91. Photo by MiSAK2023—A. Vicari.

A second fragment (GT ST70571, sporadic; Fig. 13), which is probably part of a medallion, has a double row of beads between two cornices of different widths.[17] Within the frame is a possible separator of uncertain interpretation.

The double-beaded cornice finds numerous comparisons in Sasanian art. Still, the most significant, also considering its presumed provenance from a site called Qara Tepe, in an area near Kirkuk, is a fragment of a medallion held in the Iraqi National Museum (Kröger 1982: 187-188, pl. 75.2). No point comparisons were identified regarding

[17] The external cornice has a width of about 2 cm, the internal cornice of about 1 cm, the diameter of the beads is about 1,5 cm.

Fig. 12 - Gawr Tepe, stucco fragment (GT ST70567) from square AM91. Photo MiSAK2023—A. Vicari.

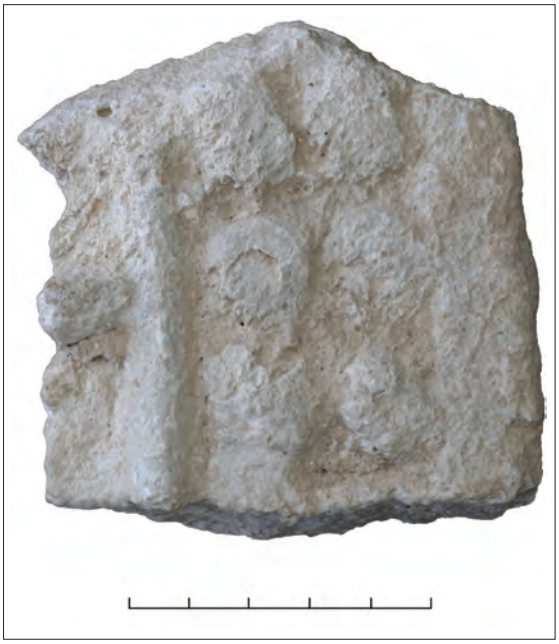

Fig. 13 - Gawr tepe, sporadic stucco fragment (GT ST70571). Photo MiSAK2023—G. Giubergia.

Fig. 14 - Hawsh-Kuru, sporadic stucco fragment. Photo courtesy of the Garmian Antiquities Department.

the visible element within the cornice, except for a stucco fragment discovered at Hawsh-kurw by archaeologists from the Garmian Directorate of Antiquities (Fig. 14). The striking similarity between the two fragments, as well as the bodies used in their construction, at least based on preliminary optical analysis, suggests a potential connection between these two productions and a likely shared chronological horizon.

A third fragment (GT ST70566, sporadic) displays traces of a circular cornice, or vine branch, with two thin relief bands. Within the "cornice," remnants of numerous globular elements are still discernible.[18] Taking into account also the reconstructed dimensions of a possible round medallion that would have a diameter of approximately 20 cm, the globular elements possibly represent a bunch of grapes. In this case, due to the fragmentary condition of the object and its poor state of preservation, it was impossible to find a timely comparison. Still, some similarities are recognisable, in our opinion, with fragments from Kish (*ibid.*: 190-193, Pl. 80.4 and related bibliography) or Chal Tarkhan (*ibid.*: 201-202, pl. 95.5-6 and related bibliography), the latter dated to the Omayyad Period, but also with some decorated bricks found near Ctesiphon (*ibid.*: 237, Pl.

[18] The two bands have a width of about 1,5 cm, the globular elements have a diameter of about 1,5 cm.

Fig. 15 - Gawr Tepe, sporadic stucco fragment. GT ST70566; Photo by MiSAK2023—G. Giubergia.

103.4, 104.1-2 and related bibliography) and Seleucia-Tell ʿUmar (*ibid.*: 237, Pl. 104.3 and related bibliography), dated between the late Parthian and early Sasanian periods.

Two fragments (GT ST70564, square AM 92; GT ST70570, square AD 102; Fig. 16), show phytomorphic decorations. The size of the two fragments does not allow clear identification of the floral motif, probably in both cases palmettes or lotuses. It makes it extremely difficult to find timely comparisons. However, some similarities can be seen in productions from Kish (*ibid.*: 190-193, pl. 84.4 and related bibliography) Tepe Hissar (*ibid.*: 193-194, pl. 89.4-6 and related bibliography), or Tepe Mil, for which a possible dating to the 8th century is not ruled out (*ibid.*: 202-203, pl. 96.2, 5, 97.1 and related bibliography).

Thanks to the invaluable support from the KRG General Directorate of Antiquities and Heritage and the Garmian Directorate of Antiquities, it was possible to export some samples of stucco, plaster, and mortar from Gawr Tepe and other Parthian and Sasanian sites in the region for an archaeometric compositional analysis. Even in the preliminary optical analysis carried out with a digital microscope during the 2023 MiSAK campaign, the presence of at least two potential distinct productions with different fabric compositions was evident. One of these seems to be characterised by a high percentage of gypsum, which makes it particularly loosely cohesive and chalky. Among the identified stucco fragments with decorative motifs, the latter

Fig. 16 - Gawr tepe, two stucco fragments with phytomorphic decorations (A: GT ST70564 from square AM 92; B: GT ST70570 from square AD 102; Photo by MiSAK2023—G. Giubergia).

fabric is attested exclusively in fragment GT ST70570 (Fig. 16B). It cannot be ruled out that one of the two hypothetical productions may be connected to a different occupational period.[19]

LC

The Future of the MiSAK Gawr Tepe Project

The archaeological material uncovered so far displays a remarkable quantitative and qualitative richness and diversity. Preliminary analyses indicate a significant continuity in production techniques and decorative styles during the Sasanian period, followed by subsequent evolutions and adaptations in the Islamic period. Identifying imported ceramic artefacts further signifies the active engagement of the region in transregional trade.

These results, in any case still preliminary, are far from unexpected. The present-day Garmian region corresponds to an area of enormous historical and archaeological interest. It serves as a natural hub connecting the Mesopotamian area and the Iranian plateau. During the periods when this territory was under the rule of the great Iranian empires, it played a crucial role in understanding the relations and interconnections between these empires' main social and economic centres. Similarly, this area maintained its function as an essential linkage even during the later Islamic period. The interface function and the undisputed archaeological richness of the area are attested by

[19] See fn. 7.

numerous historical sources, which mention the numerous road and trade arteries that cross this land and by the several significant archaeological sites identified so far.[20]

Given these premises, undertaking a multidisciplinary and diachronic study of the historical archaeological landscape during the rule of the Iranian empires and in the transition to the Islamic period is compulsory for understanding the area's socio-economic development and the interactions between the various components that made up the complex and articulated socio-cultural substrate of the area.

The location, the large scale of the site, the richness of the archaeological materials found since the surface collection, and the presence of a significant occupation from at least the Sasanian to the Middle Islamic period make Gawr Tepe a key site and a perfect starting point for a territorial study, which will necessarily have to be undertaken through a convinced diachronic multidisciplinary approach.

For these reasons, the upcoming archaeological activities at the Gawr Tepe will involve geological and geophysical surveys, stratigraphic excavations, palaeobotanical and palaeozoological research and architectural investigations. Conservation and enhancement work on the site and the structures found are also necessarily included.

Geophysical surveys will be conducted to delineate the true extent of the archaeological site and comprehensively map and analyse sub-surface features, providing essential insights into the site's layout. Targeted stratigraphic excavations allow for establishing a chronological sequence of the site's development. Simultaneously, consolidation efforts will be initiated to stabilise and preserve newly uncovered features, safeguarding archaeological findings from future potential damage. This integrated approach is poised to yield a nuanced and comprehensive understanding of the historical evolution, cultural context, and architectural intricacies of Gawr Tepe.

Geophysical surveys are tentatively assumed for the spring of 2024, while the opening of the first stratigraphic trenches is planned for the fall of the same year.

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[20] See General Directorate of Antiquities 1976; Casana, Glatz 2017 and related bibliography; Cereti, Terribili, Tilia 2015 and related bibliography; Terribili 2021 and related bibliography; Cereti, Terribili 2022 and related bibliography.

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