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The Price of Conflict: Devastation of Cultural Heritage in War and Political Strife, the West Bank as a Case Study

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ABSTRACT

The recent wave of armed conflict in and around the Gaza Strip, which began on October 7, 2023, has resulted in an unprecedented scale of looting and destruction of archaeological sites in the West Bank, with the aim of extracting valuable artefacts for personal financial gain. The antiquities looters used both traditional hand tools and heavy machinery in their plundering activities. This armed conflict (still ongoing as of this writing), which has led to the destruction of numerous archaeological sites in the Palestinian Territories, motivates this research. The primary objective of this study is to identify the impact of the recent political crisis on Palestinian archaeological sites, specifically focusing on the case studies of Khirbet Qusātin, Khirbet Sīmiyā, and Khirbet 'Abda, all located in Hebron governorate. The methodology employs a multidisciplinary approach, including field surveys, photography using cameras and drones, literature review, and analysis of available satellite imagery.

KEYWORDS

Conflict zone; satellite imagery; antiquities looting; bulldozing; the West Bank; cultural heritage destruction; Hebron Governorate; Palestinian territories

Introduction

In the midst of war and political conflict, humanity often experiences the catastrophic consequences not only of the destruction and downfall of societies, but also the severe harm to and eradication of cultural heritage. The remnants of previous societies and civilisations, as well as the urban fabric of present-day communities, are constantly at risk of destruction and looting. This has a profound impact on our collective human existence, severing the connections that tie us to our history, fracturing our shared memory, endangering the very core of our cultural identities, and fostering animosity between communities. Throughout contemporary history, wars and political conflicts have consistently posed a significant threat to cultural heritage resources. The parties to armed conflict frequently employ such intentional destruction as a weapon: causing extensive damage to historic cities and villages; demolishing monuments of historical, architectural, religious, and aesthetic significance; and looting archaeological sites. The number of archaeological sites and historical monuments that were initially targeted during military conflicts over the past 130 years is extensive, the list including such places as the medieval university

library in Louvain, Belgium; the great cathedral in Reims, France; the old town of Warsaw, Poland; the Bamiyan Buddhas in Afghanistan (Archibong 2019, 127–129); Ebla and Tell Jifar in Syria (Cunliffe, Muhsen, and Lostal 2016, 9); the Temple of Pel in Palmyra, Syria (Brosche *et al.* 2017, 249); the Ottoman bridge Stari Most in Mostar, former Yugoslavia (Cunliffe, Muhsen, and Lostal 2016, 9); the Yemeni sites of Qubbat al-Mahdi, the Ma'rib dam, Baraqish, and the National Museum in Sanaa (Khalidi 2017, 736–737); Hosn Niha in Lebanon's Beqa' Valley (Newson and Young 2015); and several shrines, tombs, and mosques in Timbuktu, Mali (Martinez 2016). Now, during the 2023–2024 war on the Gaza Strip, the cultural heritage sites of the region have been damaged on an unprecedented scale by Israeli military strikes. These include: Al-Omari Great Mosque, Al-Pasha Palace, Al-Saqqa Palace, Saint Porphyrius Orthodox Church, the Roman cemetery near Jabaliya refugee camp, and the ancient seaport of Anthedon (ICOMOS Palestine 2024; Taha 2024, 9–17). Although an official damage assessment of Gaza's heritage assets has not yet been done, the documented destruction of educational institutions and the known deaths of many heritage specialists put the cultural heritage resources of the Gaza Strip at even greater, unprecedented risk (Andreou, Elkoudary and Hassouna 2024, 8).

Conflict zones also offer ideal conditions for the proliferation of looting and the illicit trade in antiquities, due to a variety of elements:

- (1) The disruption of legal systems and social order during conditions of war provides a favourable setting for looting, enabling both individuals seeking immediate opportunities and organised criminal networks to enter and exploit archaeological sites (Al-Houdalieh 2012, 102; Cunliffe 2014, 229–36; Fabiani 2018, 2–4).
- (2) Conflicts frequently lead to disorder and disruptions that shift focus and resources away from the safeguarding and monitoring of cultural heritage resources, rendering archaeological sites vulnerable to acts of vandalism, looting, and destruction.
- (3) The impaired economic conditions and unemployment resulting from conflict incentivise individuals to engage in looting as a means to secure their basic survival, or to seek financial benefits. In regions ravaged by armed conflict, the level of unemployment rises substantially and poverty becomes widespread, forcing individuals to exploit archaeological objects as a lucrative source of income (Al-Houdalieh 2010, 32–3).

Furthermore, the damaging impact of archaeological site looting is inextricably linked to the rising demand for archaeological goods, a relationship that has been thoroughly investigated by various experts. Elia (1997, 85) viewed antiquities looting as part of a larger economic framework, the antiquities market, which operates to meet collectors' desire for ancient objects. By examining the level of site destruction and damage in the countries of origin, and also by analysing the provenance of the collectors' holdings, we can get some idea of the scale and intensity of the looting problem. In short, in order to solve the looting problem, we must focus on the demand side of the market (collectors) rather than simply on the supply side (looters, middlemen and dealers). According to Brodie (2010, 261), numerous states and international NGOs have established legal tools and other normative instruments designed to limit the trade in illegally extracted archaeological objects, and relevant professional groups have started to investigate the

ethical dimension. Nonetheless, laws and ethics have fallen short of their goals, and the problem continues. Proulx (2013) addresses the prevalence of site looting as a global phenomenon driven by both local and international factors. She argues that the demand for antiquities, driven by collectors and the art market, perpetuates archaeological site looting, resulting in irreparable loss of cultural heritage and historical data. Gerstenblith (2023) expands upon this connection, highlighting how market demand for antiquities promotes illicit excavations and archaeological site plundering, which calls for strong legal frameworks and international collaboration in order to combat the illicit trade. Kersel (2023) explores how the consumption of antiquities, particularly those from historically crucial regions such as the Holy Land, exacerbates the dynamics of looting. She argues that consumer demand not only encourages antiquities looters, but also creates a complex network of illegal trade across various countries. Collectively, these scholarly studies demonstrate the cyclical relationship between the demand for archaeological materials and the loss of archaeological sites due to looting, underlining the importance of comprehensive legal and diplomatic measures to address this ongoing problem.

In recent decades, archaeologists have begun to pay more attention to documenting cases of illegal excavations at the sites they study, including the large-scale use of satellite imagery to identify looting activity. Researchers have even attempted to develop methods for automatic or semi-automatic identification of looting pits (Kopij *et al* 2023, 74). The impact of satellite imagery on the practice of heritage protection and management has been so positive that national and international organisations, heritage bodies and practitioners now regard satellite-based assessment as a key source of objective information in monitoring a site's physical condition. The growing number of interventions employing satellite imagery and other cutting-edge geospatial technologies to map threatened archaeological sites, or to safeguard critical cultural assets, serves as empirical evidence of the trend (Tapete and Cigna 2019, 4). High-resolution aerial and/or satellite imagery can provide much quantitative information, allowing for site damage identification and assessment without the need for time-consuming and costly on-site visits (Contreras and Brodie 2010, 101).

This is particularly true in countries or regions that have been rendered inaccessible by war or political strife, as well as in areas situated between zones of greater archaeological knowledge (Frankin and Hammer 2018, 58). Therefore, in situations where in-person reconnaissance is difficult or impossible, satellite imaging is proving an extremely effective tool for assessing and measuring site damage, as evidenced by recent studies in Afghanistan, Iraq, Syria, Egypt, and Jordan (Kersel and Hill 2019: 307–10). As an example, Casana and Laugier (2017, 1–27) used recent, high-resolution satellite imagery to monitor damage or destruction impacting archaeological sites in Syria, northern Iraq, and southern Turkey. Using a large database of archaeological and heritage sites throughout the region, as well as access to constantly updated DigitalGlobe satellite imagery, this project has developed a flexible and efficient methodology for logging damage observations in a way that allows for both spatial and temporal queries. After carefully evaluating nearly 5,000 sites, their analysis reveals unexpected trends in the timing, intensity, and location of damage, allowing the researchers and other professionals to better comprehend Syria's and Iraq's unfolding cultural heritage issues (Kopij *et al* 2023, 74). Although these methods offer significant time savings, critics

point out that they primarily record pits with regular shapes, neglecting other types of damage that are readily visible during the more time-consuming, on-the-ground, expert evaluation. Still, remote imaging tools can greatly assist both regional and supra-regional studies, allowing a quick assessment of the extent of damage without the need for site visits.

Fradley attributed limited, open-access, high-resolution optical satellite coverage of Palestine, Israel, and the Golan Heights to restrictions imposed during the early 1990s establishment of the United States' commercial satellite imagery market. Under the Clinton administration, Israel reacted hostilely to the gradual declassification of satellite images accumulated since the 1960s, viewing these releases as a threat to national security (Fradley 2024). However, such restrictions have been reduced recently, and researchers can obtain high-resolution images from open-source platforms, like Google Earth Pro.

The political and economic context of the latest wave of plundering of archaeological sites in the West Bank

Before the outbreak of the hostilities in October 2023, some 160,000 West Bank labourers, about 20% of the total Palestinian workforce, were permitted to work inside Israel. The majority of these worked on a daily basis, contributing over \$3 billion annually to the Palestinian economy and accounting for about 15% of overall disposable national income. This arrangement played a vital role in keeping overall unemployment in the West Bank at approximately 20%. Since the beginning of the military campaign on Gaza, however, most of those labourers, previously employed inside Israel, are now barred from working at their former jobs, sharply boosting joblessness in the West Bank to about 30%. Further aggravating the economic situation was the October, 2023 decision by Israel's Finance Minister, Bazalel Smotrich, to completely suspend Israel's agreed monthly transfer of 'commercial clearance taxes' to the treasury of the Palestinian Authority. Every month, the Israeli government collects, on behalf of the P.A., over \$250 million in tariffs on commodities imported into Palestinian territory, and Israel has periodically suspended the transfers as a punitive measure, over a dozen times since 1997. These tax transfer payments, however, are absolutely critical to Palestine's state budget, financing the salaries of more than 150,000 public employees and the rest of the operational expenditures of the Palestinian Territories, totalling around \$300 million every month (MAS 2023, 3).

Being so heavily dependent on these clearance taxes as the primary funding source for public salaries, the Palestinian Authority has been unable to pay its employees fully and consistently. As a result, a substantial number of public employees have experienced serious financial hardships, significantly impacting their lives and their families' welfare. Many of them now lack sufficient financial resources to cover even the cost of fuel for their cars, or of alternative transport. Due to these dire conditions, most Palestinian government ministries, including the Ministry of Tourism and Antiquities, have had to adopt an emergency approach whereby their staff are available at their workplaces and on duty only two or three days per week.

Concurrent with the war on Gaza, Israeli military forces and settlers have increased their presence and hostile activities throughout the West Bank. In the first seven months since October 2023, Palestinian citizens in the West Bank suffered 496 deaths,

4,950 injuries, and 8,590 arrests (Al-Quds Al-Arabi, May 6, 2024). Furthermore, Israeli military forces have carried out repeated ‘pre-emptive’ raids into nearly every Palestinian city, town, village, and refugee camp. Israeli military operations and settler violence have thus effectively isolated many Palestinian communities, further limiting their already compromised freedom of movement. Due to increased Israeli aggression and intensified Palestinian resistance in the West Bank, Palestinian police and other security forces have focused their efforts on protecting their own headquarters throughout the West Bank, particularly the Palestinian leadership’s base in Ramallah. Unfortunately, all of this has hampered the efforts of the Tourism and Antiquities Police Department and the Department of Antiquities and Cultural Heritage to protect and monitor Palestinian archaeological sites and historical monuments, as well as to combat the illegal trade in antiquities.

Despite its small size of 5,968 square kilometres, the West Bank is considered a territory rich in archaeological and historical heritage, with approximately 12,000 archaeological sites and features, 700 historic villages, and approximately 50,000 traditional buildings (Al-Houdalieh and Jamal 2020, 86). The Oslo Accords, signed by Palestinians and Israelis in 1993 and 1995, established a limited Palestinian Authority in the West Bank and the Gaza Strip. The Accords also divided the West Bank into three areas: Area A (18.2% of the West Bank and 3.8% of historic Palestine) under complete Palestinian civil and security control; Area B (21.8% of the West Bank and 4.5% of historic Palestine) under Palestinian civil control but Israeli security control; and Area C (60% of the West Bank and 12.5% of historic Palestine) under full Israeli civil and security control (Al-Houdalieh 2010, 32; Kersel 2015, 27; Al-Houdalieh and Jamal 2020, 84–85).

The case studies

Considering the relative lack of satellite imagery available to the Palestinians to determine the extent of damage caused by looting at archaeological sites, we (the authors) initiated a series of in-person visits to randomly chosen archaeological sites, beginning during the second week of the war’s outbreak, in October 2023. Our primary objective for the present site visits was to determine ‘on the ground’ the impact of the hostilities in the Gaza Strip on archaeological sites located in the West Bank. After visiting sites for a period of two weeks, we recognised a clear increase in the quantity of antiquities looting activities. In response, we decided to form a larger survey team consisting of our academic archaeology students working side-by-side with officers from the Tourism and Antiquities Police Departments. We divided the team of 16 individuals into four groups, assigning each group to survey multiple regions. Next, we organised and conducted a field training workshop for the team members, equipping them with the essential skills and knowledge needed to document any new infringements caused by antiquities looters found during their site visits. This included training team members in the use of cameras, smartphones, and written documentation. Our analysis also made use of the GeoMOLG platform, an integrated spatial information system that came online several years ago as a project of the Palestine Ministry of Local Government (MOLG), developed in collaboration with German partners.

Despite the numerous hazards encountered by our fieldwork teams and the absence of any financial support for this project during the first seven months of the on-going Gaza war and the full-scale invasion of the West Bank, we have already succeeded in surveying

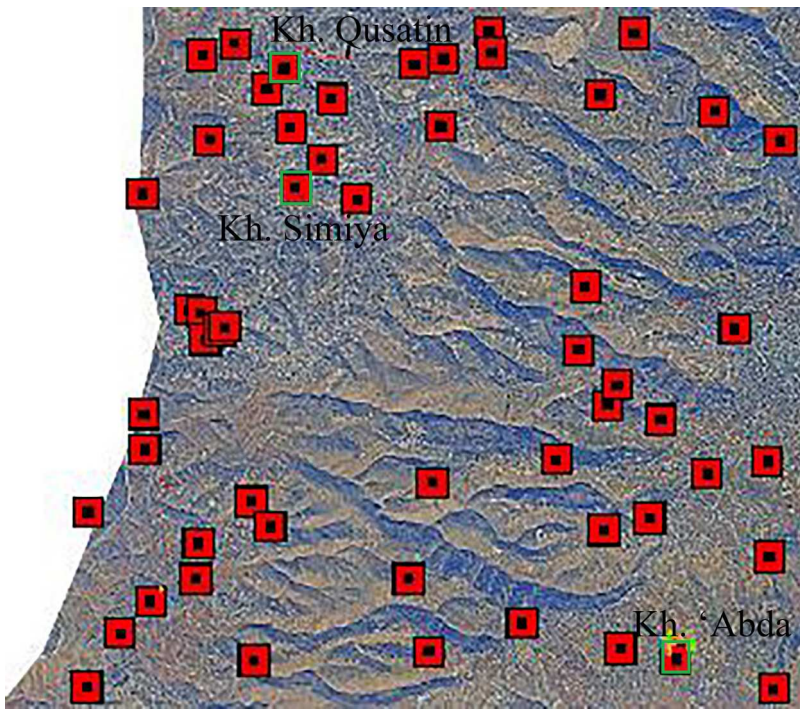


Figure 1. The location of Khirbet Qusātin, Khirbet Simiyā, and Khirbet ‘Abda. GeoMOLG satellite imagery, 2024.

and documenting 300 archaeological sites scattered throughout the West Bank. We went to 140 of these sites multiple times, ranging from two to five visits, in order to monitor and update their physical condition over time. (This wider project is the focus of a separate paper.) Here, as a small sample of our work, we present the findings from a series of visits to three archaeological sites located near the town of Dura in the Hebron governorate: Khirbet Qusātin, Khirbet Simiyā, and Khirbet ‘Abda (Figure 1). The survey team consisted of four individuals, and the process of surveying and documenting each site required two-and-a-half to three hours per visit. We first visited these sites on May 4, 2024, however, because of Israeli security activities in the Dura area, we were unable to use drones on that occasion. As a result, we revisited these sites with the goal of taking drone images on May 25th, 2024. Even then, however, the Israeli radars positioned on the summits of the neighbouring mountains prevented us from flying the drone above an altitude of 70 meters.

Khirbet Qusātin

The *khirbet*, which covers an area of 15,000m², is located on the southern slope of a spur northwest of Kh. el Kôm (Figure 1). It is dated to the Roman, Byzantine, Early Islamic, Mamluk, and Late Ottoman-Turkish periods. An Israeli survey in the early 1970s documented what was then visible: several rock-hewn caves varying in shape and size were identified; one cave, apparently used as a dwelling by shepherds, was fronted by an

enclosure or pen 7×7 m in size and built of stones of various sizes. On the eastern side of the *khirbet*, six rock-hewn cisterns of varying depths and volumes were documented, two of which featured heavy stone cap-rings covering the mouth openings, with the central round aperture of the rings measuring 65×65 cm. Stone terraces mark the agricultural plots across the *khirbet*, constructed from the remnants of old buildings, including cut ashlar, fragments of a column, and a capital. At the foot of the slope to the west are the remains of constructions from the 1940s, re-using ancient, rough-hewn stones. The tomb of Esh-Sheikh Qusātīn (the *khirbet* is said to be named after him) is located on the northeastern edge of the *khirbet* and measures $1.83 \text{ m} \times 2.55 \text{ m} \times 1.16 \text{ m}$ in height. It is constructed of field-stones and ancient masonry pieces, beneath a massive oak tree. Villagers from the western region of the Hebron governorate used to visit the tomb to worship and to obtain the sheikh's blessing (Dagan 2006, 34).

Today, a 7m-wide asphalt street and numerous new residential complexes flank the summit of the *khirbet* and agricultural terrace walls divide the summit itself into plots of various sizes, partially planted with olive trees. These terrace walls are 1 m thick on average and up to 1.2 m high, constructed in irregular courses of both unworked field-stones and well-cut ashlar of varying sizes. Across the western portion of the summit, ruins of ancient buildings of different sizes are identifiable, surviving to heights of up to 2 m. In 2021, on the western side of the *khirbet*, a large, modern chamber tomb (family tomb) measuring 17×3.5 m was constructed, with walls built of cement bricks and a flat concrete roof standing 1.3 m above the ground.

During our first site visit to the *khirbet* (May 4, 2024), we observed fresh destruction activities on two specific land parcels situated on the southwestern side of the site, in close proximity to the paved road (Figure 2). By analysing data obtained from the GeoMOLG



Figure 2. Aerial photograph showing the recently plundered land parcels (no. 1 to 3) at Khirbet Qusātīn (photo by Mohammad Abu Nuh).

satellite imagery over the past fifteen years, we have verified that land parcel no. 1, which measures 700m² and is surrounded by continuous terrace walls on all sides, has undergone several transformations in recent years. The imagery from 2009 reveals that this parcel then contained numerous visible remnants of ancient walls, and olive trees were being actively cultivated. By 2010, however, the surface had been flattened and the olive trees removed. Later, in the years 2013–2014, new olive trees were planted in their place. Then in 2023, the olive trees previously planted in this plot were again removed and later replaced with yet new olive seedlings. By contrast, a second land parcel (no. 2) covers 900m² and has been under continuous olive tree cultivation since the 1990s. Additionally, it features the visible remains of several ancient buildings of varying sizes.

The team's first site visit to the *khirbet* (May 4, 2024) revealed the following: (1) Both land parcels had suffered significant damage due to antiquities looting activities using heavy machinery. (2) Parcel no. 1 featured numerous holes, made both by heavy machinery and with traditional hand tools. These holes were notable for their large sizes, ranging from 50 to 100m² in area and reaching depths of 2 to 3 meters. Piles of debris and a significant number of well-cut stones accompanied these holes (Figure 3). (3) In close proximity to the southwestern part of this parcel, the antiquities looters unearthed a subterranean, rock-cut tomb, found exposed at the bottom of a large hole measuring around 2.5 m in depth. Nearby, they encountered a well-cut façade hewn into the bedrock, found by digging a hole in the centre of this same parcel. (4) The excavation of trenches and holes along the agricultural terrace walls had caused portions of the walls to collapse. (5) We found numerous pottery sherds scattered across the recently bulldozed locations, with a significant portion appearing to be newly broken. (6) The majority of the recently dug holes within parcel no. 1 remained completely open,



Figure 3. Plundering of parcel no. 1 at Khirbet Qusātīn, looking south (photo by Salah Al-Houdalieh).



Figure 4. Aerial photograph showing bulldozing of the southern part of parcel no. 1 of Khirbet Qusāṭīn, looking north (photo by Mohammad Abu Nuh).

while some had undergone partial back-filling. (7) On parcel no. 2, extensive bulldozing had occurred, uprooting the olive trees and destroying nearly all ancient architectural remains. All the holes dug there had been partially back-filled with mechanised heavy equipment.

The team's second site visit (May 25, 2024) revealed the following conditions: (1) Bulldozing had now levelled the southern part of parcel no. 1, with all the resulting debris (dirt mixed with rubble and well-cut stones) deposited on the northern part of the parcel (Figure 4). (2) Additional bulldozing in the eastern part of parcel no. 2 had resulted in the destruction of the visible foundations of ancient buildings (Figure 5). (3) Since our first visit, heavy machinery had caused partial destruction to parcel no. 3, which has a total area of nearly 2500m² and is cultivated with olive trees. The recent damage here primarily occurred in areas totalling 950m² (estimated) located in the southern, eastern, and western sections of the plot (Figure 2). On the same day of our second site visit, the Tourism and Antiquities Police employees summoned the owners of the affected parcels (the presumed perpetrators) and the bulldozer driver, and initiated legal proceedings against them.

Khirbet Sīmiyā

In 1863, Victor Guérin surveyed Khirbet Sīmiyā (the name rendered in print as 'Simia') and identified many building remnants, spread across what are today various discrete land parcels. Guérin noted the remains of a diminutive fortress, whose foundation then survived intact to a considerable height, occupying the summit of this *khirbet*. Further down, to the north, he observed another building, heavily damaged with the exception of a portion of one wall constructed from finely cut stones. Among the



Figure 5. Aerial photograph showing bulldozing of ancient architectural remains on parcel no. 2 of Khirbet Qusātin, looking east (photo by Mohammad Abu Nuh).

debris, he found two broken, stone column shafts and additional well-cut ashlar. These finds established, in his analysis, that this building had served as a church during the Byzantine period (Guérin 1869, 203). Then, during the 1870s, Conder and Kitchener visited the site and identified the presence of ancient wall foundations, caves, cisterns, and tombs. One of their notable architectural finds at the *khirbet* was a tomb carved into the bedrock. Situated to the north of the site, it consisted of a courtyard, a porch, and two burial chambers. Two pillars and two pilasters, adorned with simple capitals, supported the porch. The pillars were covered with a frieze featuring nine medallions (Conder and Kitchener 1883, 379–380).

The *khirbet* covers an area of 30,000m² and is now located within a Palestinian village known as Simiya (in Area B, according to the Oslo Accords) (Figure 1). It dates back to the Hellenistic, Roman, Byzantine, Early Islamic, Mamluk, and Ottoman-Turkish periods. At the start of the twentieth century, shepherds and villagers from nearby Dura settled near the *khirbet*, and some of them restored and used a few of the abandoned buildings. The site's eastern section has seen the construction of new buildings over the past few decades, using stones from the *khirbet*. Agricultural terrace walls, constructed with both field-stones and well-cut ashlar, partition the entire site into land parcels of varying sizes. Several rock-cut cisterns and numerous caves were recorded both on the site and in the immediate vicinity. The above-mentioned Israeli survey in the 1970s identified certain other specific features which were no longer evident to our team in 2024. In the southwestern section of the site a long, carved stone lintel measuring 0.55 by 3.70 m was seen, incorporated into the wall of a building and featuring an illegible inscription enclosed within a *tabula ansata* frame. Also recorded at that time were a stone-carved olive crushing basin and remnants of two stone press-weights. A wine-

press, carved into the bedrock, was identified on the site's northwestern slope; this structure featured a treading floor measuring $2.7 \times 3.2 \text{ m} \times 0.44 \text{ m}$ deep and a collecting vat measuring $0.62 \times 0.98 \text{ m} \times 1.4 \text{ m}$ deep (Dagan 2006, 66–67, 71).

By again analysing the GeoMOLG satellite images, we were able to track and document the changes and modifications that have occurred on the *khirbet* over the past 27 years. In 1997, the northern area of the site was densely planted with olive trees, while the southern portion contained the visible remains of various ancient structures, rock-cut installations, and a handful of trees. In 2006, a parcel located in the southern section of the *khirbet*, measuring approximately $4,300\text{m}^2$ in area, was bulldozed and levelled, resulting in the destruction of all the ancient structural remains seen previously. By 2016, the northwestern part of the *khirbet* had seen the construction of a 4m-wide pathway that stretched for 50 m, flanked by low terrace walls on both sides. In 2023, two additional parcels, ranging from 800 to 900m^2 in area and situated in close proximity to the southwestern side of the above-mentioned $4,300\text{m}^2$ plot, had been cleared down to bedrock using bulldozers. Finally, the western slope of the *khirbet* has seen the construction of eight new buildings in the past twenty-four years.

During our team's first site visit (May 4, 2024), we realised that three land parcels located in the northern part of the *khirbet* had very recently experienced substantial damage as a result of antiquities looting activities (Figure 6). The scale of the destruction can be identified as follows: (1) Parcel no. 1, which measures 1000m^2 , had been subjected to extensive plundering, involving the use of both traditional equipment and bulldozers to dig numerous trenches and holes of varying dimensions and depths. The documented pits and trenches, which were limited in number, had dimensions ranging from $1 \times 1.5 \text{ m}$ deep to $1.3 \times 10 \times 2 \text{ m}$ deep. The larger, well-defined holes were more prevalent, with



Figure 6. Aerial photograph showing the recently plundered parcels at Khirbet Simiyā (photo by Mohammad Abu Nuh).

dimensions ranging from 120×1.4 m deep to 150×2 m deep (Figure 7). Based on our observations of the newly-made cuts into the ground and the fresh levelling of dirt heaps resulting from excavation, we were able to deduce that approximately 75% of this entire parcel had been subjected to plundering and looting of antiquities (Figure 6). (2) Parcel no. 2, covering an area of 650m^2 , was likewise subjected to extensive plundering and damage (Figure 8). The main tool used for the destructive activity here was a bulldozer, resulting in the uprooting of nearly all the previously existing olive trees. The entire surface of this parcel is currently occupied by freshly formed mounds of soil of various sizes and heights, multiple stacks of well-shaped large stones, and also several excavated holes of different sizes. At two locations within this specific parcel, we identified piles of extremely fine soil particles and collections of small stones intermixed with pottery sherds. These findings suggest that those engaged in the looting utilised fine-mesh screens to sift out and collect any small objects of potential value. (3) In parcel no. 3, which measures 950m^2 , we discovered five holes varying in area from 8 to 12m^2 with an average depth of 1.3 m. (4) Parcel no. 4, which encompasses an area of 600m^2 , was also subjected to extensive bulldozing and pillaging. On the eastern side of this parcel, we came upon a substantial hole 350m^2 in area and 2 m deep. The digging of this hole resulted in the destruction of a mosaic pavement, the demolition of all remnants of ancient buildings, and the uprooting of numerous olive trees. The still well-preserved section of this mosaic floor is located to the east, running beneath an agricultural terrace wall and a 90cm -thick layer of undisturbed soil. The entire expanse of this parcel is characterised by an abundance of scattered mosaic cubes in various colours, well-cut building stones, and fragments of pottery.

During the second site visit (May 25, 2024), it was apparent that there had been no additional instances of looting on any of the above-mentioned land parcels. However,



Figure 7. Holes in parcel no. 1 of Khirbet Simiyā (photo by Salah Al-Houdalieh).



Figure 8. Aerial photograph showing the recently plundered parcel no. 2 at Khirbet Simiyā, looking northwest (photo by Mohammad Abu Nuh).

a new, previously undisturbed parcel (no. 5), measuring around 2,500m², had been very recently subjected to serious plundering employing heavy equipment. The bulldozer dug trenches that measured two meters wide and 1.2 m deep, running in parallel manner neatly between the rows of mature olive trees (Figure 9). While many of the trenches were found back-filled, two of them still remain visible, suggesting that the looting activities are not yet over. On the same day of our second site visit, Tourism and Antiquities Police employees summoned the owners of the affected parcels (the presumed perpetrators) and the bulldozer driver who plundered land parcel no. 5, and initiated legal proceedings against them.

Khirbet 'Abda

Khirbet 'Abda is located close to 'Abda village (in Area B, according to the Oslo Accords) (Figure 1) and covers the summit of a prominent hill. This vantage point offers a wide view of the area in all directions (Kochavi 1972, site 186). The *khirbet* has been determined to cover a total area of approximately 20,000m², and it was inhabited during the Roman, Byzantine, and Early-Late Islamic periods.

For our survey, we found it appropriate to divide the top surface of the *khirbet* into three sections: the southern slope, the summit, and the eastern slope. This division was based on the clusters of newly-dug trenches and holes, since the existing terrace walls do not physically delineate all of the *khirbet's* land parcels, unlike at the two sites mentioned above. The 1990s GeoMOLG images show that a massive wall then surrounded the summit of the *khirbet*, enclosing an area of approximately 6,600m², with piles of stones and remnants of other walls extending in various directions. During the years 2005–2006, an area measuring around 1,350m², situated in the northern part of



Figure 9. Plundering on parcel no. 5 at Sīmiyā, looking east (photo by Salah Al-Houdalieh).

the enclosed summit, was flattened. At that time, the 2014 imagery indicated the presence of two large trenches, 90m^2 and 125m^2 in area, located immediately south of this flattened area. By 2021, there was visual evidence of around 25 newly-dug trenches and holes spread throughout the southern part of the summit. Further study of the GeoMOLG images shows that the extensive looting of the eastern slope of the *khirbet* first began in 2022. This involved digging large trenches and holes near the eastern wall enclosing the summit, while simultaneously constructing a 3m-wide pathway across the middle of this slope, along a north–south line. In 2022, the plundered sections on this slope covered an estimated $2,800\text{m}^2$ (excluding the pathway).

Our first site visit to the *khirbet* (May 4, 2024) revealed the following: (1) The southern slope was dotted with dozens of relatively small holes and trenches dug along the bed-rock's natural and man-made cavities. The antiquities looters had recently succeeded in identifying and plundering a subterranean rock-cut tomb in the lower part of this section, resulting in the dispersal of human skeletal remains near the tomb entrance (both internally and externally), consisting of skull fragments and a variety of other bones (and pieces) of different sizes. (2) The southern part of the summit, where we documented 34 recently dug holes, had been subjected to severe damage, using both traditional digging tools and heavy machinery (Figure 10). The majority of these holes were located very close to each other and measured 10m^2 to 125m^2 in area, with depths of between 1 and 2.3 m (Figure 11). Some of these holes had been partially back-filled, while the majority remained uncovered, with piles of soil and well-cut stones surrounding them. We estimate that the recently plundered area in this part of the *khirbet* is approximately 850m^2 in size. (3) On the eastern slope of the *khirbet*, we identified 33 recently dug holes of all sizes and shapes, dug with both traditional digging tools and heavy machinery (Figure 12). Some of these holes were dug along the summit's



Figure 10. Aerial photograph showing the recently plundered areas at Khirbet 'Abda, looking north (photo by Mohammad Abu Nuh).



Figure 11. Aerial photograph showing the recently plundered summit at Khirbet 'Abda, looking west (photo by Mohammad Abu Nuh).

eastern wall and in between the excavated holes from 2022 (Figure 13), but the majority were to the east of the earlier holes. According to our calculations, the total area of excavated holes on this slope over the past seven months is approximately 450m².



Figure 12. Aerial photograph showing the recently plundered eastern slope at Khirbet 'Abda, looking west (photo by Mohammad Abu Nuh).



Figure 13. Holes alongside the eastern wall of the summit of Khirbet 'Abda, looking southwest (photo by Mohammad Abu Nuh).

On our second site visit (May 25, 2024), we were encouraged to find no new evidence of digging or other disruption. However, only ten days later we had occasion to visit this particular *khirbet* for a third time (June 4, 2024), in order to take measurements of two

previously looted rock-cut, subterranean tombs from the Roman period. On this third visit, we found that someone had now bulldozed a long pathway or corridor, at least four meters wide, starting from the bottom of the southern slope and then zigzagging up the eastern side of the hill toward the summit, for a total length of about 280 m. This newly constructed road resulted in widespread destruction of the archaeological layers, as well as their associated architectural remains (figure 14). Immediately, Tourism and Antiquities Police summoned the owners of the affected parcels (the presumed perpetrators) and initiated legal proceedings against them.

An alarm bell for field archaeologists

Antiquities looting, as is well known, destroys the archaeological context, making scientific reconstruction of the past impossible. The loss of this contextual information, whether for a specific object or an entire site, hampers the ability of archaeologists to draw conclusions about the cultural, social, religious, architectural, and economic aspects of ancient societies. Thus, the looting of antiquities poses significant challenges and consequences for field archaeologists and other cultural heritage professionals, including those of generations yet to come. Archaeologists will face a particular challenge during their future archaeological excavations in the West Bank, i.e., trying to excavate in areas that once experienced plundering and looting, while lacking any knowledge of that site's plundering history. In this situation, an unfortunate result is inevitable: a waste of effort, money and time, and the loss of any genuine opportunity to investigate the past.

Our field experience over the past two decades has revealed that the majority of the archaeological sites in the Palestinian territories, which are mostly privately owned



Figure 14. The newly constructed pathway on Khirbet 'Abda, looking south (photo by Mohammad Rushdi).

and used for olive tree cultivation and seasonal crop production, have experienced substantial destruction and vandalism. Furthermore, our site visits indicate that the majority of the holes created by antiquities looters in agricultural fields have been back-filled, either before or during the next ploughing season in autumn and winter. While this of course restores the landscape, it also erases all discernible traces of the former plundering. That is, it often leaves no visual clue whatsoever that the integrity of the site, archaeologically speaking, has been severely and irretrievably compromised. Given the current circumstances – a mere reflection of a much wider phenomenon stretching back decades – we recommend that archaeologists planning to carry out archaeological excavations in the West Bank and other countries in the Middle East exercise caution when selecting archaeological sites for their work. It is advisable to thoroughly examine the literature related to antiquities looting, analyse all available aerial photographs and satellite images, and conduct interviews with local individuals, particularly the landowners, where excavations are being considered.

Conclusion

Our visits to the archaeological sites detailed above provide evidence for the serious threats impacting Palestinian archaeological sites generally, especially resulting from the ongoing armed conflict since October 2023 between the Palestinians and Israelis. During the initial seven months of this wave of war, the three sites highlighted were extensively looted, using both heavy machinery and traditional tools. This resulted in the destruction of large areas of well-stratified cultural layers, the demolition of numerous architectural features, and the possible extraction of an unknown quantity of archaeological items. The extensive looting of these sites points to distressing present realities concerning the status of Palestinian cultural assets, which are being abused on an unprecedented scale. Further, however, it demonstrates the serious problem that archaeologists will inevitably confront in the future (whether near or distant) as they are no longer able to gather reliable information from previously plundered and disrupted contexts.

Going forward, the use of high-resolution satellite images, coupled with on-site inspections, will be vital for accurately documenting the alterations and interventions, both natural and man-made, impacting archaeological sites over time. This is especially critical in the context of plundering and the looting of antiquities. Remote sensing techniques are especially important for accessing archaeological sites located in conflict zones and/or geographically inaccessible regions, as they provide a non-intrusive way to monitor the onset and progression of looting activities. As a critical adjunct to satellite imagery, site visits allow archaeologists to confirm data derived from remote sensing, to carry out thorough inspections, and to gather contextual information that satellite data alone cannot provide. By combining satellite imagery with on-site documentation, archaeologists have the tools to develop a comprehensive database revealing the looting history, including the scale and extent of destruction, for any number of documented sites. The integration of these two approaches holds great promise for improving our interventions aimed at safeguarding threatened archaeological sites and curbing the illicit trafficking of antiquities.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

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