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mediterraneo
dal passato al futuro



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In copertina
Heinrich Bünting, 1582,
Europa Prima Pars Terrae In
Forma Virginis
La Vergine dall'aria perplessa
tiene in mano la Sicilia come
globo crucigero

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Mediterraneo dal passato al futuro

Contenuti

Editoriale	
Molte fedi sullo stesso mare Enzo Siviero	4
Europa federata e Mediterraneo Umberto Serafini Ristampa da: <i>Comuni d'Europa</i> , maggio 1989	5
Un nouveau monde Méditerranéen Espace de partage par l'éducation la science et la culture Léo Vincent	8
Mezzogiorno d'Italia Serve una visione univoca e coerente di sviluppo per l'intero Paese Danilo Merlo, Bruno S. Sergi	12
Noi e il Mediterraneo Una lunga difficile storia Riflessioni introduttive Giuseppe Campione	15
La Macroregione Mediterranea Centro Occidentale Origini e prospettive Cosimo Inferrera	16
TMT Trigenerazione Marino Termica Leopoldo Franceschini	22
Khirbet et-Tireh Salah Hussein Al-Houdalieh	24
L'Italia: link naturale socio politico culturale Bia Lucido	28

Khirbet et-Tireh

Giving a neglected, endangered ancient site new potential for tourism and learning

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Khirbet et-Tireh – a site located approximately 16 km north-west of Jerusalem with remains dated to the Hellenistic, Roman, Byzantine, and Early Islamic periods – has suffered over the past two centuries from severe depredation, resulting in the total loss of about three-fourths of its once-settled area. However, our excavations in the now-protected part suggest that the exposed cultural remains here possess high tourism potential, encompassing several features of historic, religious, and aesthetic interest. Further, our many discoveries offer a window into the irretrievable loss of material culture and related data suffered by the rest of the site, mainly the result of unplanned and uncontrolled urban development projects

Author biography

Salah Hussein Al-Houdalieh, Professor of Archaeology and Cultural Heritage, Institute of Archaeology of Al-Quds University. Al-Houdalieh's current research and teaching interests include archaeology and ethnography of the Levant, cultural identity, antiquities looting, mosaics, cultural heritage ethics, Roman-Byzantine architecture, and the stratigraphy of the Early Bronze Age in the Middle East. Several of his fieldwork projects have examined how both urban development and the looting of antiquities sites are impacting Palestine's cultural heritage and endangering its archaeological resources. Al-Houdalieh has published numerous books and peer-reviewed journal articles.

Introduction

Thousands of archaeological and historical sites and features scattered throughout the Palestinian National Territories face serious, ongoing challenges, including: the negligence of the Palestinian public, based largely on ignorance and lack of awareness; the pressure of population growth and the consequences of increasing urbanization; insufficient master planning for development; inadequate oversight of housing and other construction; ill-advised and unregulated agricultural activities; active illegal digging and looting of heritage objects; inadequate law enforcement; a lack of funding and of well-trained professionals in the areas of conservation and site management; and a lack of coordination among the relevant parties concerned with cultural heritage. Add to this the ongoing local and regional political crises; Israeli construction of settlements, bypass roads, and the separation barrier; and the fragmentation of the West Bank, under the Oslo II accord signed in September 1995, into the three administrative areas A, B, and C. Area C – comprising about 60% of the West Bank and likewise encompassing nearly 60% of its archaeological sites and features – is still administered under full Israeli civil and security control. All of these factors have contributed to the destruction, either partially or totally, of thousands of archaeological sites and features, and to the illegal extraction of hundreds of thousands of archaeological objects which ultimately find their way into the illegal antiquities market (Al-Houdalieh 2006, 2010; Al-Houdalieh and Tawafsha 2017).

Site location, ownership and history

Khirbet et-Tireh/el-Tira is nestled in the central hill country of the West Bank some 1.5 km west of the historic core of Ramallah. It is located in a well-developed urban quarter of that city which includes the Women's Training Center of the United Nations Relief and Works Agency (UNRWA); several other schools; many residential and commercial buildings; a few entertainment venues; a Nelson Mandela statue; and the Chinese embassy. Other archaeological and historical sites in the vicinity, relating to various periods, include: Ramallah's historic core, Kh. Shuwayka, Tell en-Nasbah, Kh. Raddana, Kh. Khalet el-'Adas, Kh. 'Askariya, and 'Ain Qinia. The ancient fortified settlement of Kh. et-Tireh once covered a total area of about 30,000 square meters, occupying the summit and slopes of a small hill. The land of the larger site is owned by several different individuals, families, or institutions. The protected part, approximately one-fourth the area of the original ancient settlement, is owned solely by the Greek Orthodox Patriarchate (Al-Houdalieh 2014; 2016). Previous surveys of the site indicated that the occupation history spanned the Hellenistic, Roman, Byzantine and Ottoman periods (See Guérin 1874-1875: 43-44; Lagrange 1892: 452-453; Schneider 1934: 219-221; Bagatti 2002: 126-128; and Finkelstein and Lederman 1997: 352). Our excavations at the site have documented architectural remains of the Roman, Byzantine, and Early Islamic periods, and agricultural terrace walls from the Ottoman period. One of the main aims of the Khirbet et-Tireh project is to develop the now-protected part of the site into an archaeological park.

Site assessment

Whereas Khirbet et-Tireh once covered an area of some 30,000 square meters, the undeveloped and now-protected southern end of the site, under Greek Orthodox ownership, preserves an area of about 6,000 square meters. Up until our first excavation season at Khirbet et-Tireh in 2013, this smaller parcel had been ignored and marginalized, attracting virtually no scholarly or archaeological interest, neither Palestinian, Israeli nor

foreign to conduct scientific excavations and to manage or at least protect the site. (From 1967 until 1995 the authority lay with the Israeli Staff Officer for Archaeology; after Oslo, it was up to the Palestinian Ministry of Tourism and Antiquities). As for the place itself, besides being home to several venerable olive trees the area of our focus was completely overgrown and sometimes used as a rubbish dump.

The larger original settlement has been subjected to a range of destructive activities over the past two centuries, including: agricultural operations involving heavy machinery, urban development of many kinds (Fig. 1), and illicit digging. The earliest documented plundering activities at the khirbet in modern times go back to 1850, when Ramallah's Greek Orthodox community dismantled some of Tireh's ancient walls to use the stones in constructing their new church in the historic core of Ramallah. In recent decades, Khirbet et-Tireh has suffered from the construction of multiple streets and roads running through the site, and also the building of several structures on the site itself, including educational, residential and commercial facilities. Much of this development of course employed heavy equipment to remove all cultural remains down to bedrock, all without the benefit of salvage excavations or any archaeological supervision or documentation whatsoever. These activities imposed dramatic changes upon the cultural landscape of the site and its environs: the irretrievable loss of at least three-fourths of the archaeological remains of the settlement – ancient walls, caves, cisterns, tombs, fortifications – and the cultural deposits associated with them; the disfigurement of several remaining archaeological features; and finally, the removal of many smaller archaeological artifacts from their cultural context (Al-Houdalieh 2014). Besides all this, before our involvement the now-protected and excavated parcel was actually offered for sale. However, the would-be buyer declined in the end, recognizing that the land was the last remnant of a larger ancient site and thus should not be developed. But, if that deal had gone through, and the Palestinian authorities were unable to undertake protective measures, then the antiquities on our remaining 6,000 square meters would almost surely have suffered the same fate as the rest of the ancient settlement: complete and permanent loss of the cultural materials.

The results of our excavations

Four seasons of excavation and restoration have thus far been conducted at Khirbet et-Tireh. This work, under the direction of the author and on behalf of Al-Quds University, was carried out during the summers of 2013-2015 and 2017, for a total of 23 weeks of work on-site. By the end of the fourth campaign our teams had excavated a total area of approximately 1750 square meters. Among the significant architectural features uncovered are: a rock-cut, subterranean hiding complex of the Roman period; two Byzantine-Umayyad churches; several Byzantine-era burial caves and ground graves (Al-Houdalieh 2014; Al-Houdalieh 2016); a Byzantine-Umayyad subterranean, rock-cut oil press complex; a Byzantine-Umayyad rock-cut cistern (Al-Houdalieh 2015); two pathways or streets leading to the churches; several residential units from the Byzantine to Early Abbasid periods; and numerous Ottoman-period agricultural terraces. In this present article, we present some information on the two churches, the oil press and cistern, and the residential structures.

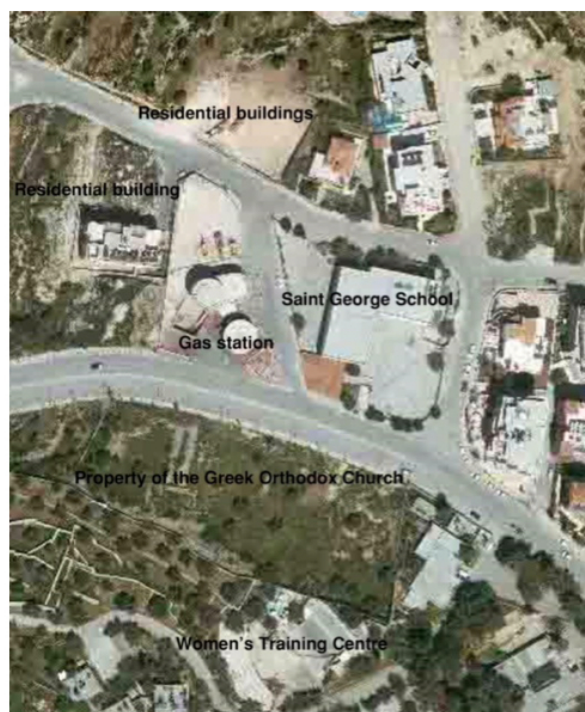


Fig. 1: Aerial photograph showing the new construction at Khirbet et-Tireh, 2012. (Al-Houdalieh 2014: Fig. 2).



Fig. 2: Aerial photograph showing the unearthed architectural remains at Khirbet et-Tireh, 2015. (Al-Houdalieh 2016: Fig. 2).



Fig. 3. Part of the mosaic of the Eastern Church of Khirbet et-Tireh, 2015. (Photo by Raed Khalil).



Fig. 4. Part of the oil press at Khirbet et-Tireh, looking east, 2015 (Photo by S. Al-Houdalieh).



Fig. 5. Some of the residential architecture at Khirbet et-Tireh, looking west, 2014. (Photo by S. Al-Houdalieh)

The two Byzantine-Umayyad churches

Two churches were excavated at the khirbet, designated 'western' and 'eastern' according to their relative locations (Fig. 2). The Western Church follows a basilical plan and consists of two main sections, northern and southern. The northern part, consisting of a narthex and a main hall, has internal measurements of 16.2 m x 9.2 m. The narthex alone measures 9.2 m x 2.5 m, with two doorways providing entry on its northern and southern ends. The main hall is divided by two rows of columns into a nave and two aisles. The entire area of this part of the church was once paved with mosaic carpets consisting of simple geometric designs, with the richly colored tesserae encompassing various shades of white, black, gray, orange, and pink (Al-Houdalieh 2014). The southern wing of the western church, which is only partially excavated, consists of a narrow hall connected with the church proper via two doorways. The hall's internal measurements are 2.15 m by perhaps 12 m. The unearthed area of this hall is paved with well-cut stone slabs of different sizes, some of them measuring 1.2 m x 0.7 m (Al-Houdalieh 2016).

The Eastern Church complex, located 10 m east of the western church, measures approximately 28.5 m along its east-west axis and 25.5 m wide in its maximum north-south dimension (Fig. 2). At its core is a basilical hall, but this complex encompasses five parts: four auxiliary rooms along the south side; an atrium; a narthex; the main hall, divided by two rows of columns into a nave and aisles; and three auxiliary rooms on the north. Traces of eight doorways were unearthed in this church, most quite similar in their design and method of construction and measuring between 1.15 m and 1.6 m wide. The floor pavement throughout the church complex consists of colored mosaics, except for one the side rooms paved with plain white tesserae. Several mosaic carpets were revealed, varying in size and physical condition. The pavements of the atrium and narthex consist of medium-size tesserae 1.5 cm by 1.5 cm and 2.1 cm thick on average, at a density of 35 tesserae per 100 square centimeters. The tesserae of the main hall are smaller, however, averaging 150 cubes per 100 square centimeters. Here, several distinct mosaic carpets were revealed, geometric and figurative patterns rendered in shades of black, gray, yellow, orange, pink, wine red, green and blue, all on a white background (Fig. 3). Notably, in the nave all of the original animal depictions were altered in antiquity and replaced with white tesserae, clear evidence of iconoclastic influences. By contrast, the unaltered pavements of the two aisles consisted only of geometric patterns on a white background (Al-Houdalieh 2016).

A crypt was unearthed in the northern portico of the atrium. It consists of a subterranean chamber measuring 2.2 m x 2 m x 1.55 m high and includes three east-west oriented ground graves. Skeletal remains of three individuals were found in this crypt, along with several associated funerary objects. Furthermore, we unearthed three ground graves in one of the side rooms of the church, but they proved completely empty of any kind of funerary objects or human skeletal remains. Therefore, we believe that these graves were constructed to serve as memorials for three different religious persons.

The oil press and cistern

This oil press is a subterranean, rock-cut installation whose entrance is located between the two churches. It is accessed by means of a staircase built of roughly dressed stones of various sizes. The press complex consists of an L-shaped, man-made cave with two distinct floor levels. The first room functioned as a crushing chamber, and the other, whose floor lies at least 70 cm lower, was the pressing chamber (Fig. 4). The crushing chamber is nearly square in plan and measures 4.3 m x 4.3 m x 2.3 m in height, with two tunnel-like openings in the west wall (interpreted as remnants of a Roman-period tomb). The room is open on the south, where it joins the other chamber. This room contains a crushing basin with concave top surface and carved from a single massive block of hard limestone; it was originally set in a shallow depression in the bedrock floor. The basin has a square central socket-hole, and cut into the ceiling above is a smaller, round socket. The southern room of the complex, the pressing chamber, is elongated and rather irregular in shape, measuring 7.5 m x 2.7 m. The floor of

this chamber is uneven, with several man-made features – a pit, a press-bed and basin, and channels – cut into the bedrock surface. This room's southern and eastern walls include three large, cross-shaped press-frames cut as recesses into the bedrock walls (Al-Houdalieh 2015).

A cistern was documented just to the right of the staircase leading down to the oil press. It is rectangular in shape, hewn completely from the limestone bedrock, and has three mouths. Inside, the cistern measures approximately 4.5 m (east-west) x 3.4 m (north-south) x over 4 m deep. The interior surface is coated with two layers of hydraulic plaster in which pottery fragments, grog and gravel were embedded. Nearby, remains of two feeder channels have been traced for a maximum distance of 4.8 m. We believe that both these channels were once connected to vertical drainage pipes used to collect rainwater from the roofs of surrounding buildings.

The residential areas

During our four excavation seasons we have unearthed 28 rooms, either completely or partially, belonging to two different residential complexes separated by an ancient pathway or street. All of these domestic buildings lie very near the two Byzantine–Umayyad churches, therefore we believe they constitute parts of a large monastery. Furthermore, we think that all these residential structures were built according to a unified original plan, to ensure optimal utilization of the built-up area. Additionally, almost all of these houses were constructed at more or less the same time, but somewhat later than the two churches, and were in use beginning late 4th – early 5th centuries until the end of the Umayyad period. Three different techniques of wall construction were identified in this residential architecture: (1) External wall faces built of ashlar but the internal faces of small and medium-sized fieldstone. (2) Both faces of the walls, external and internal, of ashlar construction. (3) External faces of ashlar construction and internal faces made of different-size stones, including some ashlar.

With minor exceptions, all the excavated rooms were rectilinear, either square or rectangular, with floor areas ranging between 5 and 24 square meters (Fig. 5). According to several pieces of archaeological evidence – thick walls, traces of staircases, and the presence of flooring materials like mosaics in several upper destruction layers – we believe that both of the site's residential complexes stood two stories tall.

Conclusion

Khirbet et-Tireh, like thousands of other archaeological sites throughout the Palestinian Territories (and in other parts of the world), has suffered from negligence, marginalization, and from many severe destructive impacts. The result has been damage to, or the complete demolition of, the cultural layers and all associated features and artifacts – and thus the loss of much valuable information necessary for the reconstruction of the past. The main threat for Khirbet et-Tireh has been the modern urban development projects, which have caused the destruction of three-fourths of the larger fortified site as well as the extraction of a large number of archaeological objects. To mitigate the impact of such risks upon other archaeological sites located throughout the Palestinian Territories, the author proposes the following actions to increase the protection of archaeological resources, while still allowing urban development projects to continue in a planned manner: (1) Improving oversight by the Palestinian Ministry of Tourism and Antiquities for all archaeological resources located within the Palestinian Territories. (2) Upgrading the existing antiquities law to provide more stringent protection to archaeological sites. (3) Raising the awareness of Palestinian citizens about the importance and value of cultural heritage resources. (4) Enhancing the cooperation and coordination among Palestinian institutions related to cultural heritage. (5) Engaging in a more effective way with planners, developers and builders for the safeguarding of vulnerable resources (see Al-Houdalieh and Sauters 2009).

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Bibliography

1. Al-Houdalieh, S. (2006). «Demolishing Palestinian Archaeological Heritage: Saffa Village as a Model». *Near Eastern Archaeology*, vol. 69, no. 2: 102-112.
2. Al-Houdalieh, S. (2010). «Archaeological Heritage and Related Institutions in the Palestinian National Territories 16 Years After Signing the Oslo Accords». *Present Pasts Journal* 2 (1): 31-53.
3. Al-Houdalieh, S. (2014). «The Byzantine Church of Khirbat et-Tireh». *Journal of Eastern Mediterranean Archaeology and Heritage Studies* 2 (3): 188-208.
4. Al-Houdalieh, S. (2015). «The oil press complex of Khirbat al-Tira». *Jerusalem Quarterly Journal* 62: 84-96.
5. Al-Houdalieh, S. (2016). «The Byzantine Eastern Church of Khirbat et-Tireh». *Archaeological Discovery Journal* 4 (1): 48-67.
6. Al-Houdalieh, S. and Sauters, R. (2009). *Building destruction: The consequences of rising urbanization on cultural heritage in the Ramallah Province*. In: International Cultural Property Society, Vol. 16, No. 1: 1-24.
7. Al-Houdalieh, S. and Tawafsha, S. (2017). «The destruction of archaeological resources in the Palestinian Territories, Area C: Kafr Shiyan as a case study». *Journal of Near Eastern Archaeology* 80 (1): 40-49.
8. Bagatti, B. (2002). *Ancient Christian Villages of Samaria*. Jerusalem. Franciscan Printing Press.
9. Finkelstein, I. and Z. Lederman (eds). (1997). *Archaeological Survey of the Hill Country of Benjamin*. Jerusalem. Israel Antiquities Authority Publications.
10. Guérin, V. 1874-1875. *Description Géographique, Historique et Archéologique de la Palestine: Judée*. Paris, Imprimerie nationale.
11. Lagrange, M-J. (1892). «Lettre de Jérusalem (Excursion au Jourdain)». *RB* 1: 439-456.
12. Schneider, A. (1934). «Zu einigen Kirchenruinen Palästinas. Die Kirche auf Chirbat et-Tireh». *Oriens Christianus* 31: 219-225.